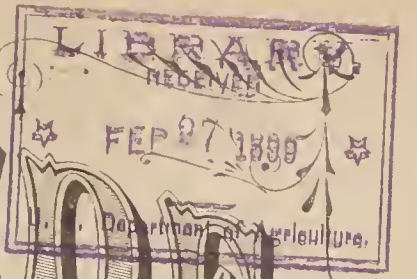
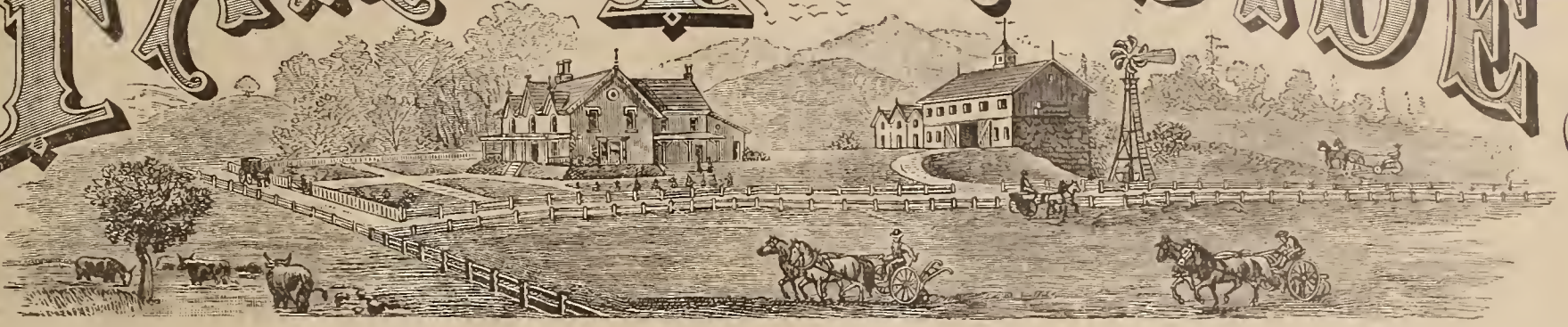


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THE FARMER IN THE ALPS

BY EDWARD A. STEINER

THE mountains are God's most inhospitable domain on earth. In many regions they are constantly at war with man, and their smiling moods are as rare as they are beautiful. The tourist who passes through the Alps, who climbs some celebrated peak, roped to a couple of guides, who sees the glorious sunrise and sunset, the picturesque valleys and smiling lakes, has no idea of the constant struggle between man and nature. As he drinks his glass of milk, fragrant with the scent of grasses and wild flowers, he does not realize what care it took to bring that milk to him. How much danger and how much labor and how much anxious herding went into that glass of milk!

We picture the mountaineer as a happy, frolicking sort of a creature, who plays the lute all day long, and sings when he does not play, and dances when he does not sing. The peasants in the Alps are as a rule very solemn, except on Sundays, when they drink a little more wine than usual and grow noisy and boisterous and throw glasses at one-another's heads. The solitude in which they dwell during the long winter months makes them solemn; the dangers which they meet every day give their minds a strong religious tendency, which is often tainted by gross superstition. The peasant is always honest, his wife and daughters are virtuous, and his home is the most hospitable in Europe.

Let us visit a farm in the Tyrol among the Austrian Alps. In a valley which is hemmed in between grizzly giants, whose snowy heads never lose their whiteness, you see what seems to you a little toy house, the roof covered by heavy stones, to keep the wind from running away with it. The living-rooms are up-stairs, and the cattle live peacefully in the lower story. We enter a whitewashed room, which is very scantily furnished with a pine table and a few rough benches. On the walls are pictures of innumerable saints with glorious halos, of the Virgin Mary with a red heart, and also a carved image of the Christ, whose face bears all the marks of deepest agony. The mistress of the house, who is as broad as she is long, and who looks like the eastern hemisphere in our school atlas, but who does not require twenty-four hours to revolve around her own axis, greets us heartily at the door with this usual salutation, "Praised be the Lord Jesus Christ;" to which you are

expected to reply, "Throughout eternity. Amen!" A German, who for the first time visited the Alps, greeted his landlady in his customary way, "I am your most obedient

Above the forests the grass grows, and upon such steep and dangerous places that even sheep cannot reach it. The grass is brought down thousands of feet, in

The farmer's clothing is substantial and picturesque. His short trousers are made of chamois leather, his shoes are heavy and the soles studded with sharp nails. His frame is muscular, his features handsome, his health almost always good, and his family large. One farmer's family, living on the ridge of a mighty mountain, isolated and poor, boasts of about twelve children, and an attempt to photograph them all at once had to be given up, and they were taken in sections. Our own hostess has brought into the world eighteen children, and most of them are alive and seemingly hungry. The evening finds nearly the whole family in the little living-room; the lengthy devotions over they all retire, some into beds, others into hay, and we step out into the beautiful summer's evening.

The air is balmy, and we sit down upon some rocks and are hushed into silence by the grandeur of the evening hour. The sun is already behind the mountains; their crests are touched by a fading blue, and those toward the west are glowing in fiery splendor. There is a lonely, sleepy chirp of birds that are ready for their feathery pillow; the lowing of cattle in the distance is heard, and the call of the shepherd—a joyous echoing call. Some one somewhere is blowing a horn, the church-bells come ringing in to the sweet harmony, the air has been touched by some magic wand, and all is suddenly still.

"Hushed on the bill is the breeze,
Scarce by the zephyrs the trees softly are pressed;
The wood-bird's asleep on the bough,
Wait then, and thou soon wilt find rest."

We are hushed into peace, the mountains around us seem like mummies asleep for a thousand years. At once a pallor flits over the face of the sky. It glows into pink, and now, as it fanned by the wind, it flames into vast streaks of purple and red, and the clear, cold mountains are alive again as if walking by spectral light. The sky is red, and in the tracks of the stars flow rivers of blood. It is the after-glow, the last struggle between light and darkness, and the dark is triumphant, and night reigns victoriously over mountain and vale.

Reluctantly we seek our bed, which consists of a feather-bed on top of a feather-bed on top of another feather-bed, and another feather-bed on top of another feather-bed, and climbing on top we sink to the bottom

(Concluded on page 6)



A VALLEY IN THE ALPS

servant, madam!" to which she replied, "Throughout eternity. Amen!"—which our polite German thought somewhat too long a term of servitude.

We have arrived just at dinner-time and are invited to partake of the noonday meal. The servants and laborers have come in from the stable and field, and after grace they sit down upon the rude benches. A large dish of soup is brought in—large enough to suggest a wash-tub—and we are asked to help ourselves. The natives draw a wooden spoon from their boots and fall to, but inasmuch as we have no spoon in our boots we are supplied with that necessary article, and try hard to get some soup and not spill it on the way, for there is "many a slip" between the bowl and the lip, and each spilt drop of soup counts against your manners. The next course consists of that fragrant national dish called sauerkraut, and here in the mountains it is served with dumplings—dumplings hard enough to have been made out of stone—and if, with your tender American stomach, you should swallow one, you would be conscious of its presence for some time. After dinner we venture out into the kitchen, where, by the side of a roaring fire, lay two babies, evidently twins, covered by a huge feather-bed, gagged with one of those contrivances, a mixture of flour, rag, sugar and dirt, which seems essential to the welfare of a mountain baby. Both babies were beginning to cry, for which we could not blame them. We follow the servants into the fields, which are mere patches of ground where a scant crop of rye is being harvested. The little sickle in the hands of men and women still does its work faithfully here, and, in fact, is the only implement that could be used in most places. The sheaves of rye are hung on poles driven into the ground, and there they are left to dry till threshing-time. During August and September haying is done, and under such dangerous conditions as would tempt us only to seek for gold.

bundles carried upon the heads of the peasants, on small, slippery paths, and many a haymaker has lost his life while carrying home his precious load. It is the custom here to mark the places where such accidents occur by memorial tablets, which have a picture of the accident painted by a local artist, and an account of the sad affair written in rhyme by the village poet. Upon one of these haying paths we saw one which, translated, literally reads thus:

"Hans Huckerbink, of Fridrichsheim,
In eighteen hundred sixty-nine,
To the crevice came too nigh,
As some haying he did try,
In August, the sixteenth day,
Now in heaven he's making hay."

The main industry of the Alpine farmer is dairying, and the summer through his herds are grazing high up near the snow-line, thousands of feet above the little farm-house. The finest grasses grow here, and as soon as the weather permits the cattle are driven to their pasture, and remain there all summer in charge of a herder. Very often the herder is a woman, who all the weary months lives alone with her cows, faithfully doing the milking, churning and cheese-making, and seldom sees a human being, save once in awhile a poacher, who seeks shelter from the pursuing foresters, or her lover, if she be fortunate enough to have one, who comes at least once a week, and who has to earn his little visit, for a good climber often needs ten or twelve hours to reach the meadows, and the way is steep and rough; but love makes the hours short and the rough places smooth. The going away and coming home of the herds are regular holidays. The cattle are decorated with grasses, and the whole neighborhood turns out to welcome or speed the parting guests. There is a ringing of bells, a tooting of horns, a cracking of whips, a yelling and singing, which to the undemonstrative American farmer seems rather strange.



HARVESTING RYE



AN ALPINE FAMILY

FARM AND FIRESIDE

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In an address before the Farmers' National Congress, recently in session at Fort Worth, Texas, President W. D. Hoard said:

"What can the farmer do, what must he do, to increase his profit, for on that hangs his prosperity. This must he do: He must realize that he is no longer a crude producer; he is a manufacturer. He must invoke science, invention, better system, more thorough organization among his fellow-farmers, more exhaustive study of the underlying principles of his business, improved methods, everything he can lay hold of, to contribute to a reduction of the cost of production.

"He is subject to the same economic laws as is every other manufacturer. The world declares it will have cheap food and clothing, for such is the humane order of our civilization. The American farmer is in the forefront of a merciless competition, for from the soil must come primarily all food and clothing. He must furnish as good as the best, or he will lose the market. He must do this at a living cost, and keep up the fertility of the soil, or he and his farm will both perish by the way. The demands of modern civilization are expensive. It costs more to live, educate his children and be a man among men than it did his father fifty years ago. There is but one road out of the difficulty as I can see. He must put more thought into this question of the cost of production. That is his end of the proposition, the farm end, the only end within his control. Heretofore the cry has been more land, until the farm has become bigger than the farmer. This makes expensive farming. The necessities of the hour say, make the farmer bigger than the farm. To keep two acres or two animals or two machines or two men to do the work of one is wasteful farming. There is no longer a remunerative market for the product of such expensive methods.

"We must not forget that a part of our duty is to stimulate a broader and deeper growth of agricultural citizenship. We have something more to live for than a living. We have, as a class, large duties to perform to the nation, the state and the community. Our standing among men is the true measure of the rights and privileges that will be ac-

corded to us in law or social relations. 'We have ourselves, not our stars, to blame if we are underlings.'

"Every other profession pays large respect to intellectual power and development. Have they secrets more profound to solve than we? Have they problems more difficult to comprehend? No. The farmer stands daily in the presence of God's laws, the most profound, the most subtle of all laws to interpret. On the outside he is met at all points with the most thoroughly trained intellectual forces of the day, all seeking, naturally enough, their own advantage and advancement. He shrinks from such contention, for he realizes his lack of intellectual training. He submits to unjust laws and systems of taxation. He sees personal property largely exempt, and landed property grievously burdened, yet he knows that the true basis of all taxation is the dollars' worth of property, without regard to its character. For his own success in his business he must be better educated as a farmer; for his own protection as a citizen he must study harder and look deeper into his relations with his fellowmen in this great social and political compact. He needs so much, and the country needs still more from him, a higher intellectual comprehension of what it means to be an American farmer and an American citizen."

Of the more important resolutions passed by the Farmers' National Congress are those favoring the construction of the Nicaragua canal, with government control of the same; the development of the beet-sugar industry; the passage of laws providing for the separation of grain from seeds of noxious weeds before being put on the market; the lease or sale of arid lands, so as to make them taxable; the extension of rural free mail delivery; the withdrawal of the privileges accorded to original packages of oleomargarine under the interstate commerce law, and harbor improvements for commerce, as well as for national defense.

THE report of the Hawaiian Commission—consisting of Senators Cullom and Morgan, Representative Hitt, and President Dole and Justice Frear, of Hawaii—and the bills recommended by the commission for the government of Hawaii, have been transmitted to Congress by the President. One of these bills provides that the constitution and laws of the United States locally applicable shall have the same force and effect in Hawaii as elsewhere in the United States. This is the usual provision found in acts of Congress providing for the establishment of territorial governments, but it is of exceptional importance in this case, particularly on account of its bearing on the labor question. By the provisions of the bill recommended to Congress coolie or contract labor will be forever abolished from Hawaii.

On this subject the commissioners say:

"It has been the policy of the government of Hawaii, both since and before the establishment of the republic, to import men under labor contracts for a term of years, at the expiration of which they are to return to the countries from which they came. Those brought in are mainly from China and Japan. Since the act of Congress annexing Hawaii was passed prohibiting Chinese immigration the Hawaiian sugar-planters have seemed to be making an unusual effort in securing the importation of Japanese laborers, fearing trouble and embarrassment on account of insufficient labor for the care and carrying on of their sugar-plantations. Of course, it becomes necessary to extend our labor laws over the islands, so as to prohibit all kinds of foreign contract labor from coming to the territory; first, because it is the policy of the country to keep out all kinds of cheap foreign labor, including coolie labor, and thereby prevent such labor from interfering with the wages of American labor, and secondly to protect our manufactured products from competition with manufactured goods produced by cheap alien labor. The general laws of the United States will place the people of the territory on the same footing with the people of the states and of other territories of the United States in regard to foreign labor. The question whether white labor can be profitably utilized in the sugar-plantations is yet a problem, but the planters are preparing to give such labor a trial, and some of them believe it will prove superior to the labor of either Chinese or Japanese."

Some anti-expansionists, whose powers of vocal expansion far exceed their knowledge

or judgment, have been trying to fool the farmers and workingmen of this country with the bugaboo of coolie labor. In season and out of season they have been, and still are, uttering solemn warnings and predicting perils on account of coolie labor in Hawaii. Before the work of the Hawaiian Commission their insubstantial structure of sophistry and misrepresentation will fade away "like the baseless fabric of a vision."

IN one of his memorable addresses at the Atlanta Peace Jubilee President McKinley said:

"This government has proved itself invincible in the recent war, and out of it has come a nation which will remain indivisible forevermore. No worthier contributions have been made in patriotism and in men than by the people of these southern states. When at last the opportunity came they were eager to meet it, and with promptness responded to the call of country. Inspired with the able leadership of men dear to them, who had marched with their fathers under another flag, now fighting under the old flag again, they have gloriously helped to defend its spotless folds and added new luster to its shining stars. That flag has been planted in two hemispheres, and there it remains, the symbol of liberty and law, of peace and progress. Who will withdraw from the people over whom it floats its protecting folds? Who will haul it down?"

"The task is not fulfilled. Indeed, it is only just begun. The most serious work is still before us, and every energy of heart and mind must be bent and the impulses of partizanship subordinated to its faithful execution. This is the time for earnest, not faint, hearts.

"New occasions teach new duties.' To this nation and to every nation there come formative periods in its life and history. New conditions can be met only by new methods. Meeting these conditions hopefully and facing them bravely and wisely is to be the mightiest test of American virtue and capacity. Without abandoning past limitations, traditions and principles, but by meeting present opportunities and obligations, we shall show ourselves worthy of the great trust which civilization has imposed upon us.

"At Bunker Hill liberty was at stake; at Gettysburg the Union was the issue; before Manila and Santiago our armies fought, not for gain or revenge, but for human rights. They contended for the freedom of the oppressed, for whose welfare the United States has never failed to lend a helping hand to establish and uphold, and, I believe, never will. The glories of the war cannot be dimmed, but the result will be incomplete and unworthy of us unless supplemented by civil victories, harder, possibly, to win; in their way no less indispensable.

"We will have our difficulties and our embarrassments. They follow all victories and accompany all great responsibilities. They are inseparable from every great movement or reform. But American capacity has triumphed over all in the past. Doubts have in the end vanished. Apparent dangers have been averted or avoided, and our own history shows that progress has come so naturally and steadily on the heels of new and grave responsibilities that as we look back upon the acquisition of territory by our fathers we are filled with wonder that any doubt could have existed or any apprehension could have been felt of the wisdom of their action or their capacity to grapple with the then untried and mighty problems.

"The republic is to-day larger, stronger and better prepared than ever before for wise and profitable developments in new directions and along new lines. Even if the minds of some of our own people are still disturbed by perplexing and anxious doubts, in which all of us have shared and still share, the genius of American civilization will, I believe, be found both original and creative and capable of subserving all the great interests which shall be confined to our keeping.

"Forever in the right, following the best impulses and clinging to high purposes, using properly and within right limits our power and opportunities, honorable reward must inevitably follow. The outcome cannot be in doubt.

"We could have avoided all the difficulties that lie across the pathway of the nation if a few months ago we had coldly ignored

the piteous appeals of the starving and oppressed inhabitants of Cuba. If we had blinded ourselves to the conditions so near our shores, and turned a deaf ear to our suffering neighbors, the issue of territorial expansion in the Antilles and the East Indies would not have been raised.

"But could we have justified such a course? Is there any one who would now declare another to have been the better course? With less humanity and less courage on our part the Spanish flag instead of the Stars and Stripes would still be floating at Cavite, at Ponce and at Santiago, and 'a chance in the race of life' would be wanting to millions of human beings who to-day call this nation noble, and who, I trust, will live to call it blessed.

"Thus far we have done our supreme duty. Shall we now, when the victory won at war is written in the treaty of peace, and the civilized world applauds and waits in expectation, timidly shrink away from the duties imposed upon the country by its own great deeds? And when the mists fade and we see with clearer vision, may we not go forth rejoicing in a strength which has not been employed solely for humanity and always tempered with justice and mercy, confident of our ability to meet the exigencies which await us, because confident that our course is one of duty and our cause that of right?"

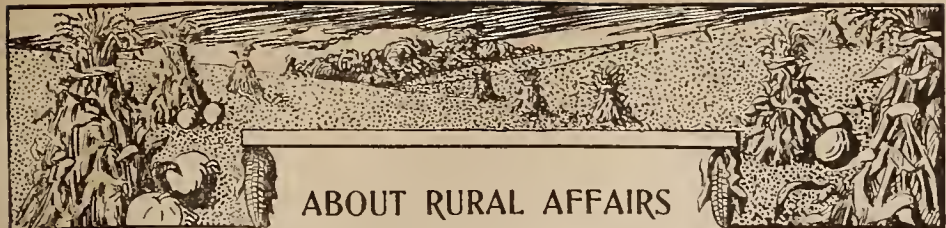
IN his Savannah address, referring to the new question before the country, President McKinley said:

"These new questions are to be thought out and wrought out, not in a spirit of partizanship, but in a spirit of patriotism; not for the temporary advantage of one party or the other, but for the lasting advantage of the country. Neither prejudice nor passion nor previous condition can embarrass the free action and calm judgment of the citizen. We have entered upon new paths. We are treading in an unexplored field which will test our wisdom and statesmanship. The chief consideration is one of duty; our actions must be controlled by it. No settlement is admissible which will not preserve our honor and promote the best interests of all concerned. With a united country and the gathered wisdom of all the people, seeking only the right, inspired only by high purposes, moved only by duty and humanity, we cannot err. We may be baffled or deterred and often discouraged, but final success, in a cause which is altogether unselfish and humanitarian, can only be deferred, not prevented.

"If, following the clear precept of duty, territory falls to us, and the welfare of an alien people requires our guidance and protection, who will shrink from the responsibility, grave though it may be? Can we leave these people, who, by the fortunes of war and our own acts, are helpless and without government, to chaos and anarchy, after we have destroyed the only government they have had? After destroying their government, it is the duty of the American government to provide for them a better one. Shall we distrust ourselves, shall we proclaim to the world our inability to give kindly government to oppressed peoples, whose future, by the victories of war, is confided to us? We may wish it were otherwise, but who will question our duty now?

"It is not a question of keeping the islands of the East, but of leaving them. Dewey and Merritt took them, and the country instantly and universally applauded. Could we have brought Dewey away without universal condemnation at any time from May 1st, the day of his brilliant victory, which thrilled the world with its boldness and heroism? Was it right to order Dewey to go to Manila and capture or destroy the Spanish fleet, and dispatch Merritt and his army to reinforce them? If it were duty to send them there, and duty required them to remain there, it was their clear duty to annihilate the fleet, take the city of Manila and destroy the Spanish sovereignty in the archipelago. Having done all that in the line of duty, is there any less duty to remain there and give to the inhabitants protection and also our guidance to a better government, which will secure to them peace and order and security in their life and property and in the pursuit of happiness? Are we unable to do this? Are we to sit down in our isolation and recognize no obligation to a struggling people, whose present conditions we have contributed to make?"

My fellow-citizens, whatever covenants duty has made for in the year 1898 we must keep."



ABOUT RURAL AFFAIRS

The Ice Crop It would be wasting words to explain the advantages of a continuous ice supply during the hot season for any family, and especially for the farmer and farmer's wife having the care of milk and butter. Years ago I made a cool spring answer the purposes of ice in cooling milk, keeping meats, etc.; but I cannot make a spring or its location to order. On the other hand, I can put up a cheap ice-house in any desired spot, and should find means of getting all the ice necessary to fill it wherever a supply of water can be obtained from streams, pond, canal or well. I like to cut my cakes of clear ice eighteen inches square and from eight to ten, or at most, twelve inches thick. If the ice is much thicker the cakes are rather heavy for convenient handling. For several years past I have heard much complaining about poor success in keeping ice till late in summer. My own supply has given out more than once long before the end of the season for its need. Poor packing is a prolific source of trouble. The cakes should be laid closely and tightly, and small pieces of ice tightly packed or pounded into every crevice and crack. The sawdust should be as dry as possible, and well packed, not less than a foot, or better, eighteen inches wide all around. There are two other points, however, which we should not lose sight of. An ice-house needs drainage just as much as a field does, and yet there should be no chance for warmer air to come up from below. When the water cannot run off from the bottom of the ice-house the ice will melt down or become soft and honeycombed much sooner than where the drainage is perfect. The other mistake so frequently made (and sometimes unavoidably) is putting up the ice in mild weather and when the ice is on the point of thawing. Ice cut and stored in very cold weather will surely keep longer and come out better than ice cut and stored when the mercury hovers near or above the freezing-point. The moral is obvious.

Potato Sorter and Cleaner

A contributor to "Practical Farmer" recently sent me a sketch of a device for cleaning and sorting potatoes, which seems to me so good that I feel I must give it to the readers of FARM AND FIRESIDE. The illustration makes the whole arrangement of the working parts so plain that I need say little more about it. A is the hopper; B a coarse, and C a fine sieve; both "on the shake." The dimensions may be varied to suit particular needs. It seems to me a matter of some importance to have the potatoes properly sorted in the fall. There is no need of filling up the bins with a mixed lot of tubers. We want our table potatoes all by themselves, and to be kept excluded from light as much as can be done conveniently. Those of medium size, especially of the early sorts, I like to have put away in shallow crates or boxes, and if exposed to some light, all the better, for I want them for seed. The small potatoes I also want by themselves, as they are to be fed to stock. Every morning I cook a mess of them for my hens, all that they will eat up clean (when mashed up and mixed with bran, etc.). If I have more small potatoes than are sufficient for just this purpose, cows and pigs also get more or less regular rations.

Bees and Fruit

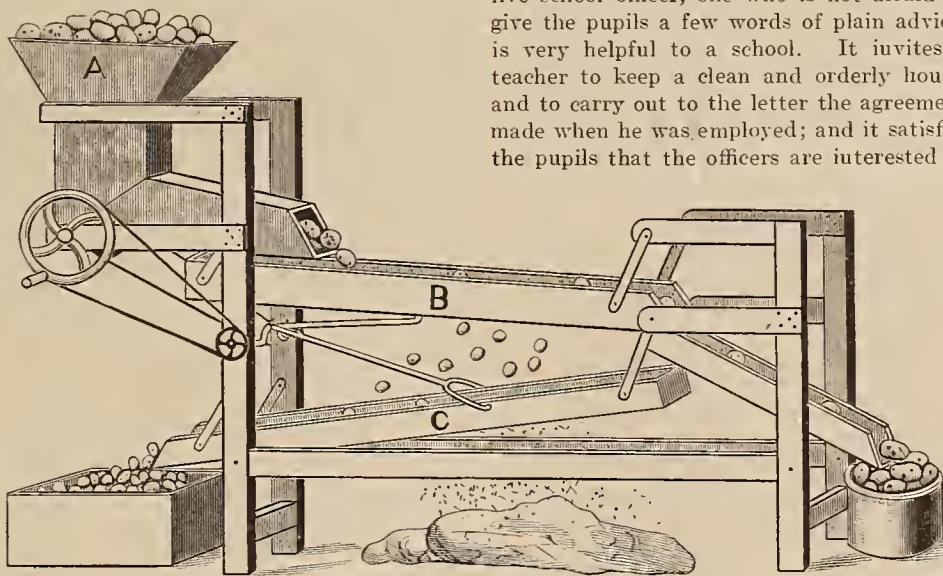
From the letters received in reply to my request for reports I find that there is a great diversity of opinion on the subject of "Bees and Fruit." Mr. William C. Woodward, of California, says he has been working in fruit for years, and has never seen any difference in the yield of fruit where eighty stands of bees were kept or where there were no bees. Mr. W. S. Fultz, of Iowa, writes that he has forty stands of bees in his orchard, and gets no more fruit than his neighbors who do not keep bees. Mrs. M. Van Buren, of Illinois, got very few plums this year, although the trees bloomed full and at that time seemed to be alive with bees, at least for a few days. From Albert Wiltz, of Kansas, I have the following:

"I have an old orchard of two hundred trees, planted about twenty-eight years ago. Last spring I kept in the orchard eight strong swarms of bees. Almost every person that

came on the place and saw the apples on these trees wondered why I alone in the neighborhood had a crop. I told people that the bees were the cause. Only a quarter of a mile away from my bees is a fine young orchard of Ben Davis and Jonathan. This did not bear any this year, and so it was all over this country, but wherever there were enough bees the owners did get apples. In Atchison one day while unloading apples I met another farmer who was also selling apples, but who had brought his apples from Rushville, Missouri, which is on the east side of the Missouri river. He told me his neighbors had no apples this year. On my inquiry he also stated that he kept about twenty swarms of bees in his small orchard, while his neighbors had no bees. Some orchards only a quarter of a mile away from my bees were without fruit, too, but this spring we had more rain than for many years, and bees did not get a chance to go very far for blossoms. Some kinds of apple-trees in my orchard did not bear one apple. When these apple-trees were in blossom it kept raining off and on for several days. Some late apples, however, bore so heavily that they did not amount to much in my orchard, but where there were no bees in an orchard there were no late apples of the same kind at all."

And finally, I will quote a paragraph from E. P. Powell's communication to "Orange Judd Farmer," as follows:

"You have correctly diagnosed the importance of insects in pollenizing tree fruits in spring. My own orchard is low-limbed, and contains thirty-five hives of bees. These



A DEVICE FOR CLEANING AND SORTING POTATOES

busy helpers slipped in between the showers, and managed to pollenize a very fair proportion of blossoms. A few of my nearest neighbors received the benefit of the same industrious workers. Wherever I have found an orchard bearing this summer it has either contained hives of bees or has been trimmed low, while the trees stand close together. Under such conditions all sorts of insects are able, even in a very wet May, to put in a good deal of work. I recommend, therefore, that our orchard trees be trimmed as low as workable, and that our farmers be encouraged to keep bees for the simple purpose of pollenization."

In these discussions, however, we should not forget that there are many insects besides bees, especially bumble-bees and all sorts of bugs, that work on fruit-blossoms, and in many cases may pollenize them properly and perfectly even if not a single bee were around.

T. GREINER.

2

SALIENT FARM NOTES

The District School

Wouldn't it be a good idea for farmers and their wives to visit their district school two or three times this month and next? In almost every district there are vague rumors floating about that the teacher is not doing as well as he or she should; that Smith's or Brown's children are especially favored; that the pupils do about as they please; that the school-room is not kept clean, etc., etc. Instead of repeating these rumors and creating ill-feeling, and possibly serious trouble, the parents should visit the school occasionally and get better acquainted

with the teacher and the methods employed in imparting instruction. They should endeavor to make it plain to the pupils that the teacher is supreme, and that all the rules are right and just and should be obeyed without question. The teacher should never be criticised or his methods condemned in the presence of his pupils. Disparage the ability or methods of a teacher in the presence of one of his pupils and every other pupil in the school will hear of it within twenty-four hours, and their respect for him is lowered, and more than likely the difficulties he has to contend with will be doubled.

If, after visiting the school a few times, one should feel like offering a few suggestions to the teacher, it should be done when no pupil is present, and any teacher who is striving to do good work and give complete satisfaction will appreciate the kindness and discretion shown, and will value the suggestion accordingly. Every person is pleased to learn that his work is appreciated. It is an incentive to greater efforts and better execution, and parents can do a teacher no greater favor than to let him know that his work is giving satisfaction and that he can rely upon them for support if any trouble should arise.

Young America is usually quite capable of taking care of all the rights and privileges allowed him, and it is a grand good idea to teach him while young that none of them shall be abridged so long as he obeys the fixed rules of authority. If he takes it into his head to defy these rules, and to consider himself equal to or greater than his superiors, he should be brought up with a round turn and taught that the way of the wilful and defiant transgressor is hard indeed.

It is the duty of every school director to visit the school occasionally, and he should not fail to do his duty. A visit from a good, live school officer, one who is not afraid to give the pupils a few words of plain advice, is very helpful to a school. It invites a teacher to keep a clean and orderly house, and to carry out to the letter the agreement made when he was employed; and it satisfies the pupils that the officers are interested in

ally be expected, some articles, supposed by the writers to be loaded heavily with important information, are scored severely. If an article contains any good suggestion, any useful information, anything of real value to the reader, it is quickly brought to light by the practical men and women who gather at these meetings.

After the selections are read and discussed, and readers appointed for the next meeting, songs, recitations or other entertainment by the young people are in order, after which the formalities close and a half hour or more is spent in neighborly chat and a general good time. No one is compelled to read, even if he or she is assigned to that duty. If one is not a fair reader he simply selects the article and sends it to some person who can do it justice, and the latter reads it for him.

The dispensing with written essays, papers and set speeches, which require much valuable time to prepare, has proved to be a good thing. It places all upon an equal footing in the matter of supplying good material for discussion, and gives the bashful man and the slow talker as good an opportunity to express their views as the man whose tongue is loose at both ends. There is not the slightest chance for an excuse for non-attendance, because there is no forcing upon unwilling persons work that they cannot possibly perform. As a natural consequence the meetings are always well attended, there is no complaint that Messrs. Gasbag and Volubility monopolize all the time and do all the talking, to the exclusion of more sensible people.

At some of these meetings even politics are discussed—that is, legislation favorable and unfavorable to farmers—and as a result rabid, unreasoning partisanship disappears from the community. The farmers learn that their interests are identical, and a broader, more liberal spirit is cultivated, and voters become more independent with their ballots. It is a revelation to some farmers to learn that a neighbor who has always been identified with the "other party" really wants exactly the same sort of legislation and the same kind of men in office that they do. It also amazes others to learn that a neighbor who belongs to the opposite party does not believe that they and their party are wholly bad and entirely rotten. This leads to closer investigation and more hard thinking, and they begin to wonder if they haven't been the tools—the playthings of men whose sole object it is to get and hold office and draw fat salaries.

When farmers come to understand each other better they can discuss political matters calmly and seriously, and decide for themselves which man or party they will support. They will not tamely submit to the dictation of party bosses, or be swayed hither and thither by partisan journals; but they will go quietly to the polls and vote for the best interests of themselves and their neighbors. It is not possible for them to maintain a "lobby" at the state capitols to push their interests, but they can make themselves understood well enough if they will get together.

The sooner they learn to discuss political measures together calmly, and with a view to learning what is best for them and the country at large, the sooner will they become a factor that will be recognized by all other interests. And at these little club and social meetings is a good place to begin.

FRED GRUNDY.

2

WEEDS

Can anybody explain why our farmers are so reckless concerning the encroachments of weeds? The wild carrot might easily have been headed off if we had the right sentiment among our land-owners. The only difficulty now in eradicating it is the fact that there is so much of it. It is easily pulled before going to seed. I would much rather deal with it than with the hawkweed, which is spreading through the fields of New York state and elsewhere. The best way of dealing with this pest, as well as with moneywort, where it gets lodged in the lawns, is to sow liberally with salt. Buy a barrel or more of damaged salt, which you can generally find at any country store and obtain for less than half price. While the salt kills the weeds it fertilizes the grass. Apply three or four times in order to thoroughly reach every plant and root.

E. P. POWELL.

OUR FARM

FARM THEORY AND PRACTICE

HARMFUL ENTHUSIASM.—A large sum of money is expended by the national and state governments for the promotion of the agricultural interests of the country. Such appropriations are fully justified by the importance of agriculture to the nation and by the precedent established of fostering other industries at public expense. This money furnishes the country with quite a little army of students and educators that are desirous of aiding the farmer by discovery of the cheapest means of production, by introduction of new crops and by extension of our markets. Many of these gentlemen have rendered great assistance, and their work has been worth to us tenfold its cost. This is notably true of those that are conducting the leading conservative experiment stations. They are practical men, and are meeting and seeking to solve the questions that arise in the every-day experience of working farmers. But in our national department of agriculture there has never been a time when either some impracticable or harmful scheme has not been exploited before us farmers by some enthusiastic theorist. Usually it concerns some new crop or kind of live stock or the means for the extension of our markets abroad.

DISPLACING WHEAT WITH CORN.—In recent years much credit has been sought for the national department on account of its efforts to enlarge our exports of corn. A considerable sum of money has been used in an effort to teach Europeans to like corn-bread. One bulletin gravely calls their attention to the finely flavored whisky that can be made from corn. The effort has been to make in Europe a market for corn in its original form, unmindful of the fact that its only effect can be to place in the hands of our customers the lowest-priced food material known in cereal form, draining the resources of our soil, when our business should be to guard our market for higher-priced material, such as wheat, beef and pork. Producing, as we do, three times as much corn as wheat, it is idle to undertake to advance the price of corn materially by opening the way for the mixing of corn flour with wheat flour in Europe, as is now the practice too extensively in this country, but we can open the way for such displacement of wheat that our one important cereal export will not be in great demand. We can thus rob ourselves of our wheat market without materially helping corn on account of its immense production.

EXPORTING CHEAP RAW MATERIAL.—Nations cannot acquire wealth and meet the competition of the world by the export of low-priced raw material. Corn makes a heavy drain upon the soil, but it produces a wonderful amount of food to the acre. This country is its home, and by its means we are cheap producers of live stock and their products. By the conversion of corn into animal products the fertility of the soil is left, in a large measure, upon the farm that produce the corn. Were it possible, a patriotic policy would dictate the desire that we have a close monopoly of this grain. This is impracticable, some European countries producing it in comparatively limited quantities; but it is an outrage that public money should be expended in an effort to have Europe share with us in the use of our lowest-priced grain, when the outcome must be a lessened demand for higher-priced products. Such a scheme may appeal to the unthinking and may be paraded as proof that officials are seeking to earn their salaries in our department, but it cannot be too heartily condemned. Our policy should be to keep our soil material, in the form of very cheap raw material, at home, and seek to extend our markets for finished products and higher-priced grain.

SPANISH-AMERICAN FARMERS.—Leading papers credit a department official with the statement that we shall now proceed to teach the owners of the fertile fields in the islands under our control how to farm. These islands contain a fertile territory that is immense in extent. We have expended much money in freeing the people, and we wish them well, but it would seem suicidal to develop that territory at a time when we cannot sell our own products, and it seems

inconsistent when we are expending much money in an endeavor to produce many of the crops here that are especially adapted to that soil. The development would bring large profit to companies that will be organized to take the profits that may be gotten from every source in our new possessions, and the development might seem to reflect glory upon officials of our agricultural department, but the hard-working farmer of this country is not willing to pay the price such glory will cost. We are told that a tax is laid upon sugar in order that our farmers may have a new crop in the form of sugar-beets. Money is spent freely in promotion of the industry by our department officials. We are told that we should produce almost everything we now import in the form of tropical products. Then leave this new soil as it is until it is needed. At least do not use our money to make competition heavier.

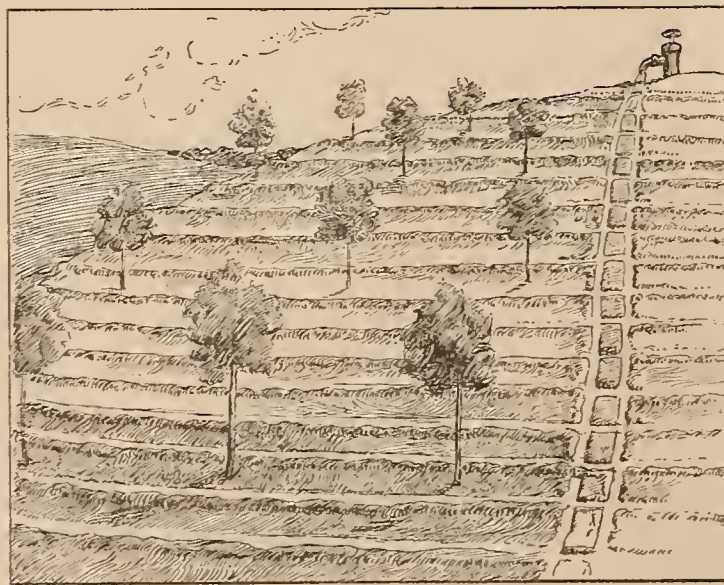
CONSCIENTIOUS SERVICE SUFFICIENT.—I certainly do not want to engage in captious criticism. As was previously stated in this article, the money expended in the promotion of agriculture by our government benefits us farmers most materially. But there is no dashing and flashy way of rendering service. We need the aid of the painstaking, practical man. The enthusiastic theorist and the man that does not keep in mind the interests of home farmers, for whom the department was created, should be relegated to the rear. The men that are footing the most of the bills are needing the undivided help of their public servants, and it should be given along lines that lead to permanent prosperity.

DAVID.

IRRIGATING A HILLSIDE

Hillside irrigation is practicable and profitable where the water supply is sufficient. In some western districts the foot-hills are planted to orchards or vineyards, and irrigated by gravity canals taken from mountain streams. Where the fall is rapid, as is usual in the Rocky mountain canyons, it is no uncommon thing to see canals delivering water 500 feet above the towns and valley farms on the streams tapped for the higher ditches. The creeks are generally tapped several miles above the canyon opening, and canals are cut in the mountain slopes, or flumes are suspended around perpendicular cliffs. The expense is often equal to \$25 an acre for the land irrigated, but it enables farmers, dairymen, apiarists and fruit-growers to obtain the choicest and most healthful localities and make homes away from the environments of cities and towns.

The surplus water used in upland irrigation enters the surface soil and creates independent channels to the valleys, where it forms subirrigation and assists in growing crops without any applications of surface moisture. I have visited different sections and noticed the same results from bench-land irrigation—the abundance of water



coming from springs, wells and pools, fed by the higher surplus and through percolations from the streams and mountain reservoirs. The water is always near the surface, and all crops withstand the driest seasons with remarkable yields of fruits and cereals. This system of irrigation is practised in the orange groves of Florida, the citrus orchards of California, the alfalfa-fields of Utah and elsewhere throughout the realms of irrigation. It is equally applicable to the hills of New England, the bench-lands of the Mississippi valley or any of the middle and southern states.

If water cannot be taken to the summit of a hill, or run around the slope by gravity canal, a pumping-plant is necessary. The pumps are generally operated by steam or

gasolene engines, though some people use horse-power, windmills or current water-wheels to good advantage. Pipes are laid on an incline, so that the water may be easily forced up to hydrants or reservoirs. Some farmers construct tanks, into which the water is emptied from the pipes and drawn off as required for irrigation. One large fruit-grower in Florida reports that the entire cost of putting in a pumping-plant, with numerous laterals, was returned the first year from the unusually large quantity and excellent quality of fruits harvested. He pumps from a slough to the top of a hill one quarter of a mile distant, using steam-engine and pipes ranging from eight inches down to one inch in diameter.

The water is taken from the main canal, reservoir or tank, and distributed into small ditches or boxes, from which it drops down hill to terraces or furrows running parallel to the slope. If hydrants are used the pumps are kept in operation only while the irrigation progresses. The furrow or flooding system may be used in irrigating a hillside orchard, vineyard or cultivated field. Water is diverted from the drop-box, or ditch, into the laterals by dams of boards or stone, as in level irrigation. Sometimes the water is conveyed in small ditches near the trees, and then left to flood over the land, finding its way to the terrace or ditch below. This system has been adopted in various sections for growing alfalfa-seed, which is harvested by car-loads and sold on the eastern market. The plan is adapted to grazing areas, and where water can be obtained without too much expense, is a happy solution of the dry-pasture question.

JOEL SHOMAKER.

THE CAUSE AND PREVENTION OF POTATO-ROT

A few years ago the potato disease known as dry or wet rot was supposed to be caused by a fungus known to science as *Phytophthora infestans*, which appears on the diseased tubers as patches of a mold-like appearance. This theory prevailed yet in 1893, when the United States Department of Agriculture published the "Handbook of Experiment Station Work."

Recent investigations have shown, however, that the said fungus is not the real cause, but that its appearance on the rotted tubers is rather a consequence of the disease itself. In a report from the Botanical Institute in Copenhagen Mr. Jensen states that different forms of bacteria, especially some *Rhizoctonia* species and the *Pseudomonas vitis*, are the real promoters of both wet and dry rot. The disease can be produced by one form alone, but is sometimes a result of a combined attack of several different germs. When these bacteria have destroyed the substance of the tubers mold-like fungi will appear and feed on the remaining organic matter.

The usual remedy of heating the tubers to one hundred and five degrees has no effect upon the bacteria. Mr. Jensen advises the following preventive measures:

1. The removal and destruction by fire of the diseased tubers.
2. The selection of resistant sorts and healthy tubers for seed purposes.
3. Preventing the development of the rot bacteria by injudicious treatment of the soil and by a proper rotation.
4. Frequent hilling.

The last is the most effective. Tests showed that

in eleven different sorts there were from three to thirty-eight per cent diseased tubers when no hilling was done, while with careful hilling this percentage was reduced to one or two per cent for the same sorts.

J. CHRISTIAN BAY.

A NEGLECTED VEGETABLE—THE DANDELION

Every one knows that the dandelion is a troublesome weed; every one does not know, however, that it is a wholesome and even delicious vegetable, useful in several ways.

When the plant does not grow in sufficient quantity in a locality to furnish the table, improved varieties, such as Broad-leaved or Improved Thick-leaved, should be selected

and planted in the garden. The soil should be a rather sandy loam, not too rich, and should be prepared as for spinach or lettuce. The seed is rather slow of germination, and should therefore be sown rather thickly, about one fourth of an inch deep in rows ten to twelve inches apart, the soil being well firmed upon it. If grown under glass, as it frequently is, the rows may be six inches apart. The flowers should be destroyed to prevent the formation of seed and its consequent drain upon the plant. If the saving of seed be an object, other plants than those which are to produce the crop of leaves should be selected. Beyond this the cultivation is as easy as that required for lettuce.

If desired only for greens the crop should be raised from seed fresh each year, and if to be forced in the autumn for salad the



seed should be planted somewhat later, say in early June. The two crops may be combined, and the plants that produce the greens may be dug in the autumn to produce the salad. For this purpose they should be lifted in October and treated in the same manner as described for Barbe de Capucin in *FARM AND FIRESIDE*, September 15, 1898, under the heading "To Blanch Chicory." The roots may also be allowed to stay in the ground until the following spring, when, just as the leaves begin to appear above the ground, they should be covered with two or three inches of sand, tan-bark or sawdust. When they peep above this covering it may be removed from part of the bed, spread over the rest, and the heads, now white, cut for use. By removing and cutting the bed by sections a succession of cuttings may be had for several weeks. After cutting the roots should be destroyed. As a salad the leaves may be eaten separately or mixed with other materials.

The dandelion is usually sold as greens at about fifty cents a bushel of thirteen pounds, at which price the crop is considered a paying one. Often, however, in the eastern markets seventy-five cents and one dollar may be obtained.

The French often eat the tender young roots as well as the blanched leaves, which resemble endive, in sandwiches of bread and butter, with sometimes chopped meat added. The full-grown root, when roasted and ground, makes a delicious substitute for coffee. It has a highly agreeable bitter taste, and is credited with tonic properties for which many families value it. Roots that have been made to produce a crop of greens or a crop of salad may still be used to make coffee.

M. G. KAINS.

SEEDING GRASS-LAND

Strange as it may seem, it is nevertheless true that many farmers yet believe that clover and grass cannot be raised successfully unless sown among barley or oats or some other nurse crop. Young clover and grass are no more injured by direct sunlight or heat than any other field-plants, and there is really no necessity for sowing a grain crop with them as a protector. In fact, where greatest yields are desired it is often far better practice, especially in dry seasons when the moisture supply is inadequate for either crop, much less both together, to sow these crops separately. When planted together and the season turns out dry, the grain, far from acting as a protector, becomes a robber and deprives the young grass or clover of needed moisture.

When sown singly on well-prepared fertile soil clover and grass germinate rapidly and make quick growth, often bearing seed-heads the same season, and if soil conditions, moisture, fertility, etc., are favorable a good crop of hay may often be harvested. Should weeds get a start, the taller ones may be cut off with a mower by setting the cutter-bar high enough to just clear the grass when the weeds are about six inches tall. But if, very early in the spring, twice or thrice the quantity of seed be sown the weeds will generally be choked out.

M. G. KAINS.

NOTES FROM GARDEN AND FIELD

THE RUNNERLESS STRAWBERRY.—Mr. M. Crawford, of Cuyahoga county, Ohio, replies to my query in regard to the bush sorts of strawberries as follows: "I regret to say that I can give no information regarding the Mexican strawberry. It fruited—bloomed, rather—here in 1896, but a late frost did so much damage that I was unable to form an opinion on any variety. The vineless variety received from Mr. Nimon was remarkable in its way, but I fear will not become popular." My private opinion of these varieties is that they are interesting as novelties or curiosities, but without much, if any, practical value for the north. Still, I propose to give them further trial.

EARLY TOMATOES.—A year or more ago I suggested the idea of utilizing tomato varieties of the Dwarf Champion type for the purpose of raising extra early tomatoes. The two most promising sorts among them seemed to me to be Fordhook Fancy, with purplish fruit, and another new kind, sent me for trial as "Ideal," which has red fruit. Plants of either may be started very early under glass, and if given half a chance will make good, stiff, strong plants that can be transplanted to open ground at the regular season and while in bloom or even fruit without suffering the least check in growth. This year (1899) I shall sow the seed in flats sometime in January, and for a later lot sometime in February. I hope to be able to have ripe tomatoes in June; have had them year after year as early as July 4th, and plenty of them in the latter part of that month. The originator of Fordhook Fancy, Mr. E. C. Green, of Ohio, sends me the following interesting letter:

"Sometime during the past year I wrote you that I intended to try your plan of raising early tomatoes; namely, by using the dwarf kinds and growing them under glass as long as possible, thinking that the dwarfs would grow to a much greater age with less trouble than the large kinds. The plan succeeded, much to my satisfaction and profit. I started my plants early in March and they did not draw or get leggy by the time for setting out, about the middle of May to the first of June. I picked my first ripe tomatoes July 8th, and commenced selling the thirteenth. For about a month I had the control of this small market, or until August 15th, and up to that time my tomatoes sold for three cents a pound, or one dollar and a half a bushel. Then they dropped to fifty cents, and finally got down to twenty-five cents. My profit came from my early tomatoes. My neighbor had a far better greenhouse that I had for growing plants, but he used the Acme. He planted his seed a week or two before I did, but in spite of all he could do his plants got long and leggy, and when he planted them out he had to set them deep into the ground. They came along well enough, but were late, so he lost the early market. My plants produced abundantly in the latter part of the season. It seems as if those that produced the earliest fruit gave also the most late fruit.

"I used the dwarf Burpee's Fordhook Fancy. It appears to me to have several points ahead of the old Dwarf Champion. The fruit is larger and of better shape. The plants are more compact and are more upright, and seemed to be slow to throw out laterals, so that the first fruit set gets the whole strength of the plant. It sets fruit under circumstances that the Dwarf Champion will not, as this does not seem to produce enough pollen to fertilize itself until it gets to growing thriftily. This I believe to be an important point with an early tomato. I have seen a new dwarf which might be called a Dwarf Early Advance. Like the Early Advance it grows its fruit in clusters and seems to set its fruit under almost all circumstances. I have said I could produce ripe tomatoes in June in this climate, and I intend to do it next year. I came within eight days from it this year with the Fordhook Fancy, and I am sure my new dwarf is that much earlier. I tried the Ideal you sent me last spring, and find it a very fine red dwarf, one of the best I have ever seen, and am certain it will be of value where such a tomato is desired."

CARROTS AND GREEN PEAS.—A favorite dish on my table for some years has been

the combination of green peas and carrots. The carrots when tender (or cooked long enough to be tender) impart a good flavor to the peas, and in themselves are promotive of full action of the bowels. This dish is therefore especially to be recommended to people of sedentary habits (and therefore usually constipated tendencies). In June, when I have my early green peas, I can not expect carrots from open ground, but often have a few to mix in from the greenhouse. These little forced carrots get quite soft and tender by just letting them come to a boil. During the winter I have to use the canned peas, but I usually manage to have a full supply of carrots in the cellar, saved for this purpose from my latest planted crop. If they were only half grown all the better, as I want them young and tender. Thus, during summer I make the combination plenty of peas and few carrots; during the winter I use the expensive peas more sparingly and the cheap carrots more freely. Of course, I have already sown a few rows of French Forcing carrot in the greenhouse bench and expect to have a supply of new-forced carrots in March.

T. GREINER.

2

LEAVING CORN A PAYING CROP

I asked you last March about a good variety of field-corn. You recommended Leaming corn, and I planted ten acres of it on rented land. I paid \$25 for the use of the ten acres. After the land was plowed it rained a good deal and I could not plant until June 2d, 3d and 5th. The land was well fitted and marked three and ten twelfths feet each way; planted three grains in a hill; used about ten loads of compost. Commenced working with cultivator as soon as I could follow the roller, and kept it up until the corn was as large as it would do to work. In sixty days from planting it was large enough for roasting-ears, and in ninety days fit to cut up. I had it all cut up in ninety-six days from planting, and I finished husking on October 28th. We had a very heavy wind about ten days before it was fit to cut, and a great many ears were broken off and were only fit for hog corn. I had 1,000 bushels of ears to crib and over 100 bushels of hog corn and nubbins, and about 2,200 bundles of corn-stalks. I have a large amount of fine seed-corn, and shall plant it again sure. Many thanks to you for your kind suggestions as to variety.

C. T. ROGERS.

ORCHARD AND SMALL FRUITS

CONDUCTED BY SAMUEL B. GREEN

A LESSON IN FORESTRY

TREE GROWTH

ASSIMILATION.—Plants are made up of various tissues, and these are formed of numerous cells. The material of which the cells are composed is largely carbon. This carbon is derived from the carbon dioxide (carbonic acid) of the air which enters into the leaves, and under the action of light, air and water is there decomposed; the oxygen is given off and the carbon is retained, and combined with water obtained from the roots forms starch, sugar, gum and other plant-foods.

This process of food-making is called assimilation, and can be carried on only in the green parts of the plant, and in these only when exposed to light and air. Hence, foliage, air and light at the top are essential prerequisites for tree growth, and other conditions being favorable, the greater quantity and better development of foliage and the more vigorously will the tree grow.

In general, therefore, the growth of wood may be reduced either by the removal of foliage, which reduces the working surface, or by shading, which somewhat checks the activity of the foliage by hindering light action.

TRANSPIRATION.—The flow of sap in trees is not well understood. In a general way it may be said that the sap-wood transmits the water from the roots to the leaves, where a part enters into the assimilated sap and goes to build up the plant, and the remainder, which is by far the greater part, passes off as vapor. The amount thus transpired varies greatly with the species, age of the tree, amount of foliage at work, amount of light at its disposal, climatic conditions and the condition of tree growth. The amount of water transpired is so large in comparison to the amount retained in the tree that while an acre of forest may store in its trees one thousand pounds of carbon, fifteen or twenty pounds of mineral substances and five thousand pounds of water in a year it may have taken from the soil and given off

to the air from five hundred thousand to fifteen hundred thousand pounds of water, or from one quarter to one half as much as agricultural crops. It has been estimated that the leaves of deciduous trees transpire one sixth to one third as much water as an equal surface of water. Large deciduous trees undoubtedly give off as much as a barrel of water a day in dry summer weather. Coniferous trees transpire much less water than most deciduous trees; frequently not over one sixth as much.

MINERAL SUBSTANCES are taken up in small quantities and consist mostly of lime, magnesia and potash. They are carried to the leaves, where they are used (perhaps also on their passage through the tree) with a part of the water in food preparation. The main part of the mineral substances taken up remains as the water transpires in the leaves and young twigs, and is returned to the soil when the leaves are shed and when the tree is cut and the brush left to decompose and make humus.

THE SOIL OF WOODLANDS IS IMPROVED from year to year if the leaves and litter are allowed to remain on the ground and fire is kept out, since the mineral matters taken up by the tree are largely returned to the soil in a more soluble form, and the amount of humus is increased. For this reason there is no need of alternating woodland crops.

Almost any soil can furnish a sufficient quantity of mineral substances for the production of a crop of trees, provided it is moist and the leaf-mold is not removed. Good soils will continue to furnish mineral matter in sufficient quantity even if a portion of the leaf-mold is carried away. If, however, this removal is continued annually for a long period, any but exceedingly fertile soils are likely to become exhausted just as land on which field-crops are grown cannot produce crops forever without manuring.

THE YEARLY ROUND OF A TREE.—In the spring the tree starts into growth and feeds on the plant-food stored up the preceding year; the leaves unfold and commence furnishing plant-food. These two sources of food push the growth along very rapidly in the spring and early summer. By the first of July the food stored up the previous season is exhausted in many trees and growth is entirely dependent upon the food furnished by the leaves. The growth at this time is generally much slower than in the spring, and as the capacity of the tree for building up plant-food increases it commences to store up starch, sugar and other foods in its cells with which to start growth the following spring, and the cell-walls become thicker and firmer. This maturing of the tree is termed the ripening of the wood, and when completed the tree is ready for winter. Our hardiest trees generally ripen their wood early in the autumn and then cease growing, although probably some food is being stored up so long as the leaves remain green on the trees.

REST PERIOD OF PLANTS.—With very few exceptions all plants require an occasional rest period for their best development. Some species get it naturally by being dried, and others by being frozen. And even when plants are kept under growing conditions the year round they have periods of rest and of excitement. During the rest period the plants undergo very few changes, and yet there is undoubtedly some growth during mild weather in winter, and as evaporation must be going on most of the time from twigs and buds water must be supplied from the roots.

THE AMOUNT OF WATER LOST BY TREES IN WINTER.—After many careful experiments A. L. Knisely, M.S., concludes that a soft maple standing thirty or thirty-five feet high, with a trunk fifteen to eighteen inches in diameter near the ground, exposing from seven hundred and fifty to eight hundred square feet of bark surface, may lose daily by evaporation from six to seven pounds of water when dormant. An apple-tree thirty years old and fifteen inches in diameter at the base, exposing from eight hundred to one thousand square feet of bark surface, may lose daily while dormant from ten to thirteen pounds of water. These figures are from results obtained during winter weather in New York. We know that after a prolonged period of severely cold weather the twigs of soft maple, apple and some other trees have a decidedly shriveled appearance which disappears after a few days of mild weather. Soft-maple trees standing on dry land will sometimes in the spring appear to have been dried out and to have become partly or entirely dead. It is probable that during our coldest weather very little, if any, moisture can be supplied from the roots, which may account for this shriveled condition.

SECOND GROWTH.—Sometimes warm, moist weather in late autumn will cause trees to start a strong second growth in October, which draws on the stored plant-food and perhaps exhausts it, and winter sets in before the tissues have again become hard and stored with food. In such cases trees are liable to injury. No characteristic of hardness is more important in plants than that of early maturity of wood. One part of the tree may start into growth without regard to the conditions of the other parts. For instance, a branch brought into a warm room in winter without severing it from the tree will grow for some time. Sun-scald is probably due to the bark on the side most exposed to the sun starting into growth very early, after which a sudden freeze destroys the young cellular tissue.

2

INQUIRIES ANSWERED

Keeping Winter Pears.—E. S. P., Guy, Wash. Perhaps the best way to keep winter pears is to wrap each of them in soft paper and put into closed boxes holding about one half a bushel each, and store in a regular cold-storage warehouse at a temperature of about thirty-two degrees. If a cold-storage warehouse is not accessible, a cold, dry cellar kept as near thirty-two degrees as possible is a good place.

Hard-shell Almond—Whale-oil Soap.—W. D. C., Alton, Ill. The hard-shell almond often succeeds fairly well as far north as central New York, and would probably stand in your section and bear fairly good crops on dry, poor land. The tree closely resembles the peach, and is of about the same degree of hardness. It is very pretty in flower, but there is no market for the nuts. The flowers are perfect, that is, do not require the presence of another tree in order to perfect fruit.—Whale-oil soap can be bought of most of the seedsmen and dealers in garden supplies.

Young Orchard Used for Garden.—E. L. H., New Albany, N. Y. The chances are that your soil is in poor condition for potatoes. I think you would probably get better returns from your garden if it is planted in raspberries than in potatoes, but it will require careful study and management on your part to make any crop profitable, as good crops cannot be grown without careful management. The special objection to your planting raspberries is that they give no income the first year after planting. It is probably best for you to plant out a few raspberries to begin with, and then increase as you find you are successful and have courage. It may also be a good place to plant a little of several other kinds of small fruits and to reserve a portion for a garden.

Baxter Apple—Everbearing Blackberry.—Mr. Benj. Buckman, of Illinois, kindly sends us the following in regard to inquiries recently appearing in these columns: "Stone & Wellington, of Ontario, describe the Baxter apple as having the synonyms of 'Larne' and 'Red Pound,' and as being a large red apple adapted for a fancy market variety; tree vigorous and regular bearer.—As I knew the Oregon Everbearing blackberry it was a good thing in Oregon. My plants of it grew well here and sent out new roots wherever covered. Fifteen degrees below zero killed the tops, not the roots, and when it was not killed the berries were poor and worthless. Then I used about twenty-five dollars' worth of labor in getting rid of them, and found them hard to kill out."

Fertilizers for Plum and Pear Trees.—C. M., Rockglen, N. Y. If your plum and pear trees are making sufficient growth, do not manure them at all, but improve your methods of cultivation and fighting insects and diseases. If, however, they are not making a satisfactory growth, manure with potash and phosphoric acid and supply the nitrogen needed by seeding to clover and plowing it in when in full flower. Cultivate carefully; do not take any crop from the land but the fruit, unless manure is added. Keep land fallow and free from weeds or grass, except as an occasional crop of clover is plowed in. A good general fertilizer for fruit-trees on one acre is made of two hundred and fifty pounds of ground bone, one hundred pounds high-grade muriate of potash and fifty pounds of nitrate of soda.

Plum and Apple Trees Not Fruiting.—J. O. S., New Kensington, Pa. It is very probable that on account of neglect that even if these trees set fruit in the years past that drought and insects destroyed it before it could mature. The Weaver is such a good plum that I am inclined to think its fruit must have been destroyed by curculio. Of course, very gravelly land is not well adapted to either apples or plums, but if in fairly good condition it should be made to produce them by careful cultivation. If the land is in sod it should be broken up and the surface soil kept stirred all summer. If the soil is too loose seed down to buckwheat about June 15th, and plow it in as soon as it is nicely in flower, and repeat until there seems to be enough organic matter in the soil. It might be well to seed to crimson clover in autumn and plow it in in the spring. The plums should be protected from curculio by jarring, and the apples from codling-moth, etc., by spraying. Some pruning is probably needed, but do not go too hard on them, but confine yourself to cutting out interlocking branches, suckers (especially around the trunks), and some of the lower limbs that will interfere with cultivation and are not needed.

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SEARS, ROEBUCK & CO. (Inc.) CHICAGO, ILL.

THE FARMER IN THE ALPS

(Continued from page 1)

before we have time to say "Now I lay me, etc." What seems to us only a moment of sleep is disturbed by the call from our landlady, whose breakfast of steaming soup and rye-bread is waiting, and after trying to redeem our manners by not spilling any soup we step out into the gray morning. The east is being touched by a faint line of red. The mountains are motionless, as if frozen in the night, and now send back an answering glow. They seem to thaw out of their misty gray into a glowing flame, and at once one mighty ray of light reaches its arm over the slumbering world, and every ice-capped hill sends it back in a thousand-fold greater splendor. The meadows are touched by the rejuvenating light, and the



ALPINE SWEETHEARTS

shadows fly like pursued demons. The lakes set high in the bosom of the mountains are glittering jewels. The birds sing cheerily a morning song, the cattle on the green hills are lowing and grazing, and our mountaineer farmers move about their little fields like chess figures, seemingly unconscious of all this beauty and splendor. Their backs are to their burdens of grass or grain, their hands are on the sickle, their eyes are on the ground, so loath to yield to them a living. Nevertheless, they see with the heart. Some of Germany's and Austria's greatest poets, artists and musicians come from these mountains, and above all else they supply their countries with virtue and with strength.

If the tiller of the soil the world over would produce nothing else they would still be the world's greatest benefactors, for the ebbing strength of the world goes to the farm for its fresh supply, and when honesty, patriotism and virtue fail the farm home has to supply them. It is so nearly the world over, but markedly so in the Alps.

Reluctantly we say good-by to our hospitable landlady, to the quiet landlord and the numerous family, including the gagged twins. We do not get away, however, without having to photograph the family, the oldest son and his good-looking sweetheart and the beautiful little farm-house. "Behut Gott"—God take care of you—they call after us. "Behut Gott," we reply, and mean it. May God guard the farm home by the mountain side, now buried in snow, imperiled by avalanche and later by flood. May the God whom you trust take care of you. "Behut Gott."

IMPROVE THE WOODS

There are few farms in the East at least, but where woods of greater or less extent are found, and most of them are in a primitive state, or worse, filled with a promiscuous lot of trees, dead and alive, and a tangled underbrush of vines and grasses. I was much impressed with the attractiveness of a strip of woods on the grounds of Mr. P. J. Berckmans, Georgia, the well-known nurseryman and pomologist. As I remember it, there were two irregular paths through the woods leading to quite large spaces, where young plants requiring shade were grown. No attempt was made to lay out the ground in any particular form, and the paths simply followed the most convenient turns between the trees. All underbrush and the trees of no particular value were taken out. As the plants were grown for sale no attempt was made to group them for artistic effect. By this plan undoubtedly many classes of plants were grown which could not have been grown in the open fields in that climate. This simply shows the busi-

ness end of improving the woods, and more or less of it is done on similar lines by nurserymen north as well as south.

From an artistic standpoint it is possible to make the farm woods "a thing of beauty" at a trifling expense. All dead and ill-formed trees should be cut out, as should also the underbrush of no especial value, leaving anything in the shape of attractive shrubs or vines, like the native arbutus, honeysuckle, ferns, etc. Retain all the native trees of good form, only thinning out when absolutely necessary to gain room for the development of the best trees. All natural formations, humps and hollows, rocks and springs, should be retained, and the walks should be arranged so as not to disturb any of the natural beauties. If trees or rocks are in the line of contemplated paths curve the walk rather than remove them. Hardy plants suited to the locality may be set in convenient places, and especially hardy ferns, orchids and herbaceous, creeping and trailing vines, which may be easily naturalized. All natural grades should be preserved and no attempt made to have the paths perfectly level. No material foreign to the woods should be used in forming paths—that is, nothing like gravel, unless the soil is naturally of a gravelly nature. In short, every effort should be made to preserve the natural effects of the woods. Seats should be rustic, made of roots and branches of trees, not dressed. The plan as outlined may seem elaborate, but in reality it can be carried out at practically no expense beyond labor, except for the few plants which may be bought. An arrangement of this sort would be worth, in satisfaction and beauty at least, all it would cost to bring it about.

GEO. R. KNAPP.

NOTES FROM CORRESPONDENCE

FROM WYOMING.—We had some very stormy weather during November—high winds and some snow, with the thermometer as low as twenty-two degrees below zero once. Stock is in fine shape for wintering. Ranch produce of all kinds is in good demand at good prices, consequently ranchmen are happy and prosperous. Work of all kinds is plenty and wages are good; no one need be idle from lack of work. The prospects are that the North Platte valley will experience the best times next summer that have been known since the early days of its settlement. L. R. Saratoga, Carbon county, Wyo.

FROM SOUTH CAROLINA.—I am located in the foothills of the Blue Ridge mountains, in the northeastern part of the state. Our leading product is cotton, though we raise nearly all crops. We grow all kinds except tropical fruits, together with vegetables of an excellent quality. Our farmers for a few years have been paying considerable attention to stock-raising, forage crops, etc. We have an excellent climate. All our spring and well water is good. Our natural pasture grasses are known here as crab-grass and broom-sedge, though we find that several varieties of clover, Burmuda, Johnson, orchard and Kentucky blue-grass do very well. Our principal forage crops are peas and sorghum. Westminister, S. C. W. P. D.

FROM GEORGIA.—Chattooga county is one of the best sections of the Piedmont fruit region of northern Georgia and northern Alabama, which is about one hundred square miles, with an altitude of 1,000 to 1,800 feet above sea-level. The best peaches are grown at an elevation of from 900 to 1,200 feet. Strawberries and grapes grow to great perfection at this height above the sea. No better apples are grown in the world than those produced on our highlands. For the last two years many northern farmers have settled on these cheap lands. They have engaged in orcharding and small fruits, and they are satisfied that there is no such thing as failure, from the fact that the pioneers who set orchards and vineyards in the 30s, 40s and 50s, have made a wonderful success in a small way. These early settlers knew nothing of growing fruits for market. They knew nothing of improved varieties or methods, but in their crude manner they managed to supply themselves with an abundance of wholesome fruit every day in the year. Thousands of acres of this same land can be bought at prices ranging from \$50 an acre upward, owing to location, nearness to railroad station, etc. There are thousands of acres of these fruit-lands yet in unbroken forests equally as good as those that have been brought under cultivation and set to trees and vines, the owners of which expect to harvest abundant crops as the years come and go. If the readers of FARM AND FIRESIDE should be attracted by this description, they can, at a small expense, procure a detailed account of the resources of this region by writing to the passenger agents of any line of railway running southwest from Chattooga. Menlo, Ga. A. J. L.

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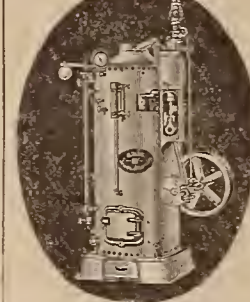
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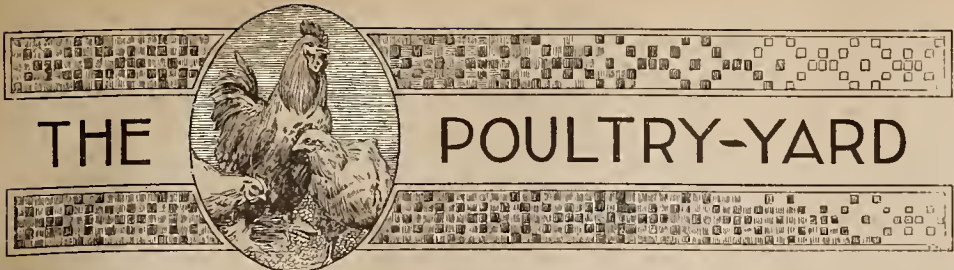
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Conducted by P. H. Jacobs, Hammonton, New Jersey

KILLING POULTRY

IN a recent issue of a prominent agricultural journal I noticed the description of a method of killing poultry which prevents the soiling of the feathers. It consists in putting the fowl in a bag with its head sticking out of a hole in the bottom, its feet being wrapped with the upper part of the bag, and so held while the head is chopped off, after which the fowl is held in a barrel until its earthly struggles are over.

I am not at present in possession of a single chick, and do not wish to be considered a poultry expert, but I have had some experience in losing money on chickens. When I was in the business, however, I adopted, and after trial rejected, nearly every method of killing that I heard of. The primitive though still popular method of decapitation, with the subsequent hilarious post-mortem gambols of the headless victim, had, in my younger days, its attractions for me. But the plucking? Too gory to be attractive! Wringing the neck was then tried, and often resulted in either the removal of the head or the voluntary return of the fowl to its mates because its neck had not been sufficiently wrung. Bleeding by cutting the veins and arteries first outside and then inside the mouth were tested and found satisfactory, particularly the latter, at least so far as cleanliness of the feathers was concerned. But as these two methods required too much time for the poor things to die, and as they always seemed to reproach me with their eyes and to struggle violently for life, I returned to the chopping method (somewhat modified) as more humane though more gory.

After practising this method for some seasons I accidentally became acquainted with a man that had been a poulterer in the markets of London, and learned from him the exclusive method practised by the craft in the large English markets. Since then I have never tried any other plan and have never seen one that seemed to me to possess notable advantages. When properly done, as described below, it leaves the flesh as perfectly white as any other method I have ever tried, and combines all the advantages of the other methods without any of their disadvantages. Like many other things, however, it is easier to practice than to describe, but here is a description.

It may be well for the novice, in order not to make a failure of this method, and thus become unjustly disgusted with it, to practise upon a dead chicken or two killed by bleeding through the mouth, or at least by some plan that leaves the head in place upon the neck. In this view the peculiar action that takes place in the operation will be learned and the beginner will know at what time the operation is complete, and can thus judge correctly when handling the live subject.

1. Hold the fowl firmly in the right hand, head downward, feet above the clasped thumb and fingers.

2. Grasp the head with the left hand so that the end of the thumb touches the base of the skull just where it joins the neck behind the comb. Let the grasp be firm, particularly with the thumb, which must not be allowed to slip.

3. For steadiness place the left hand, holding the head as described, at the left knee.

4. Simultaneously move the right hand outward and up, the left hand assisted by the knee downward and out, until the bones of the neck separate from the bones of the head. Continue to draw till the skin ceases to be loose, but becomes tight between the body and the head. It will not break if not pulled too much. By bending the head back at the time of drawing the break is more easily made. This is most useful if the fowl be an old one.

5. Hold the fowl in this position for, say half a minute, or until the spasmodic flapping is over, then hang it up, head hanging downward. Young fowls will usually flap their wings only three or four times, and older ones but little more, if these directions be followed exactly.

After letting the fowl hang the usual length of time taken in other methods of killing, pluck it, and cut off the head with a

knife. The blood may then be all removed by gentle pressure with the fingers upon the skin of the neck and against the neck itself. In this operation the hand need not be soiled with the blood.

To facilitate rapid killing and to aid in plucking I made a device like the one shown in the illustration, for holding the bird after operating upon it. I could continue killing, or when desired, I could commence plucking at once, using both hands and without in any way interrupting the proper draining of the blood from the body to the neck.

For this device select a piece of clear pine board one inch thick, and bore auger-holes at intervals so that the fowls will not touch each other. The size of these will vary somewhat with the kind of poultry to be killed, and may be determined by placing the legs together and measuring round them at their smallest part; namely, below the knee and above the ankle. The diameter of the hole should be about half the distance around the legs. These holes must be made



an inch or so from the side of the plank and connected with the edge by a slot about as wide as the thickness of the fowl's shank. The plank is then nailed at a convenient height, the holes being horizontal. When the fowl is to be hung up, slip the shins one at a time through the slot into the hole, and let the ankles rest upon the board at the edge of the hole. They will not slip through if the hole is of the proper size.

If allowed to hang until the bird becomes cold it can be handled in any position without fear of the blood returning to the flesh. It will all be in one clot at the neck.

The method can be used on all young poultry, including turkeys and pigeons. But for old birds, where the ligaments and muscles that bind the neck to the head have become very tough, there is often difficulty, particularly with large birds. But as these are more seldom killed than young ones they may be dispatched in some other way.

This is the most scientific method of killing poultry that I have ever heard of or seen practised, and with me has always been perfectly satisfactory, combining as it does certainty, which neck-wringing does not; quickness, which bleeding does not; cleanliness, which decapitation does not; and perfect drainage of the carcass in which none of the others excel it. It, moreover, requires no implements whatever. Surely enough to commend it to any one! M. G. K.

EARLY HATCHING

The object in hatching early is not only to have the chicks of a proper size to be sold as soon as the demand begins, but also to make up for any deficiency in growth, as one-pound chicks are usually in demand when the broilers (or spring chickens) first come in. Another point is that the work is usually done in winter, and will not interfere with other operations, which in one respect really lessens the cost, as many persons are often idle during that time. What is it that causes the prices of chicks to be so high? It is the care and work required to hatch and raise them, so you must consider that this attention, which the consumers are willing to pay for, must be bestowed. It does not cost over five cents a pound of meat in the shape of broilers, and yet the prices have reached fifty cents a pound, or ten times the cost; but this is what the producer obtains for his labor.

MANAGEMENT IN WINTER

There are natural laws which govern the life, growth and proper development of the chicken from the first moment of incubation all through its progress to maturity and perfection. He who would successfully rear and manage fowls must study these laws and must be governed by them in all of his treatment of them. One of the essentials is a proper degree of warmth; this is especially

so in the first stages of the chicks' life. Another is to avoid dampness; chickens in all their various stages of growth and development must be kept dry as well as warm. Another important condition is varied food and in proper quantities; this is all-important. In reference to feeding one should follow nature as nearly as possible. The ordinary system of feeding is too artificial. This implies to those who keep their fowls confined to close quarters. Very much of their management is on a basis of kindness as well as a very laudable desire to take the best care of their fowls. Another important matter is cleanliness. No matter how particular we may be in other points, if we neglect this failure will be inevitable. No amount of care as to warmth, dryness and proper food will avail in the absence of strict cleanliness.

FRESH EGGS

At this season it is not the large cities that have difficulty in getting strictly fresh eggs, but the small towns and villages. Those having eggs send them off to the cities because it is much easier to do so than to take them to the customers direct, the consequence being that the city markets are nearly always better supplied than the towns. Eggs are selling at five cents a dozen more in some villages than in large cities. Eggs can be had, it is true, but the article needed is the "strictly fresh" eggs, which is seldom to be had unless procured from reliable parties. Even in the cities the merchants are compelled to "candle" the eggs—that is, assort them—so as to discard all that might not be well up to the requirements, and the buyers of eggs pay good prices for "candled" eggs, as they have no means of knowing of them until they are used. In the towns the farmers can get good prices and build up a trade with regular customers, who will be glad to get the best and who are willing to pay well therefor.

PLACE FOR THE INCUBATOR

A cellar is an excellent place for an incubator because it is usually of an even temperature, especially if the cellar is one that will preserve roots and fruits; but the atmosphere should be pure, which will be the case in winter. Any place will answer for the incubator that is of an even and regular temperature. If the incubator is in a room where the temperature changes no harm will result, provided the operator watches the lamp-flame and does not allow too much heat to accumulate. The hot-water incubator (no lamp) must be operated in a warm place, if possible, in order to avoid loss of heat at night.—The Poultrykeeper.

EXTRACTS FROM CORRESPONDENCE

A LICE REMEDY.—I have found by experience that the best way to exterminate those little mites called chicken-lice is to take a tablespoonful of sulphur to about three of lard (any kind of grease will do except tallow; that is too hard) mixed together; then pour in boiling water, stir until it is melted, and with a cloth wash the perches and all the insides of the boxes where they sit and lay. Then tear up the cloth and wrap it about the roosts where lice are likely to hide. Do this two or three times, and you will soon be rid of the pests. I have found this to be a sure remedy if properly done. Mrs. M. E. W. Scott's Mills, Oregon.

INQUIRIES ANSWERED

Loss of Feathers.—C. M., Rock Glen, New York, writes: "What will promote the growth of feathers on the neck of a bird?"

REPLY:—The feathers will be renewed naturally without attempts to aid growth. Remove the bird from the others, as they are feather-pulling each other.

Coughs.—E. B. C., Springwater, New York, writes: "Some of my fowls seem to cough, but there are no other symptoms of disease."

REPLY:—It may be due to clogging of the nostrils with soft food or they may have cold from an overhead draft of air in the poultry-house. Inject two or three drops of camphorated oil in each nostril.

Leghorns.—O. F., Grove, New York, writes: "If a Leghorn male is with mixed hens, including Leghorns, will the chicks from the Leghorn hens mated with him be pure-bred Leghorns? Are Leghorns inclined to sit? How can fertile eggs be distinguished by testing them on the tenth day?"

REPLY:—The chicks from the Leghorn hens will be pure bred. They are styled "non-sitters," but will sit when very fat. When testing eggs the dark ones are fertile and the clear ones not. It is done by looking at each egg through a tube in a dark room, holding the eggs to a strong light.

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QUERIES

READ THIS NOTICE

Questions from regular subscribers of FARM AND FIRESIDE relating to matters of general interest will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should inclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two WEEKS before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Tunis Sheep.—E. L. P., Forks, Wash. In answer to your queries about Tunis sheep we quote the following from Stewart's "The Domestic Sheep": "These sheep are noted for their early maturity, their prolificacy (rearing two sets of lambs in the year) and yielding a fine and long staple of wool. The cross of the rams on our mutton breeds yields an improved fleece and excellent mutton. The mutton of the pure sheep has always been noted for its fine quality, and thus the cross-bred produce is valuable on this account, as well as for the fleece. The ewes are good mothers; the lambs have been made to weigh seventy pounds at the age of eighty days. This breed is hardy and of sound constitution; the rams weigh, when mature, two hundred pounds, and the ewes up to one hundred and sixty." For further information write to Secretary Tunis Sheep Breeders' Association, Fincastle, Ind.

Growing Tomatoes for Canning-factory.—R. T. Seymour, Mo., writes: "We have prospects of getting a canning-factory in this vicinity. Please give me information on planting, cultivating, harvesting and handling tomatoes. I have about ten acres within one and one half miles from town which I should like to plant."

REPLY BY T. GREINER:—A canning-factory within easy reach is a good thing, no doubt. We surely miss an institution of that kind here in our own vicinity, which seems to offer more advantages for the successful operation of one than any other locality that I know of. We would gladly plant tomatoes, sweet corn, etc., and at prevailing prices could make the business pay well. The inquirer can get full information about growing tomatoes by applying to the Department of Agriculture, Washington, D. C., for Farmers' Bulletin No. 76, which treats on "Tomato Growing," and is written by Prof. Edward B. Voorhees, the able director of the New Jersey Experiment Station, New Brunswick, New Jersey. I will make some extracts from this treatise later on.

Gypsum for Clover.—J. D. C., of Missouri, writes: "1. Will gypsum have any decided effect toward insuring a catch of red clover on very thin soil that drains well? 2. How much to the acre on very poor soil would be a liberal allowance. 3. Is a combination of muriate of potash and phosphates any better than gypsum to secure a catch on such land? How much to the acre would be liberal, and about what ought I to pay for 250 pounds of each?"

REPLY BY T. GREINER:—I well remember the time when our farmers considered land-plaster the panacea for their soils. A light application (100 to 200 pounds to the acre) would often show decided results on clover and other grasses. This, of course, was due to the chemical action of the gypsum in setting bound-up plant-foods in the soil free. But the practice of applying land-plaster, or gypsum, continuously also resulted in making the thin soil still thinner and poorer. Gypsum is not manure. It has helped to squeeze the last drop of life-blood out of many an acre. Phosphates and potash, on the other hand, are plant-foods and do permanent good. I would prefer to use these manures to feed the clover and thus make the land better. Dissolved bone can be had at from \$8 to \$12 a ton; muriate of potash at about \$45 a ton. Use a few hundred pounds of each, perhaps a larger proportion of bone on heavier loams.

VETERINARY

CONDUCTED BY DR. H. J. DETMERS

To regular subscribers of the FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two WEEKS before the date of the issue in which the answer is expected. Veterinary queries should be sent directly to Dr. H. J. DETMERS, 1315 Nell Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered.

Incontinence of Milk.—G. E. Hemlock, Ohio. Since your cow is unable to retain the milk only in the evening and morning just before milking-time the remedy is a very simple one and consists in milking three or four times a day instead of only twice. Many cows, especially while in "full milk," require more frequent milking than twice a day, and if the same were oftener milked cases of incontinence of milk and of garget would wonderfully diminish in frequency, and the pro-

duction of milk would more than sufficiently increase to pay for the additional milking.

Periodical (?) Inflammation of the Eyes in Cattle.—C. V. G., Birchinal, Iowa. I never met with nor even heard of any periodical inflammation of the eyes in cattle, and therefore cannot give you the desired information.

Too Many Possibilities.—J. D. M., Bancroft, Mich. Your inquiry suggests too many possibilities, and, on the whole, is too indefinite and too vague to make it possible to return a satisfactory answer. Besides this, the prospect of any treatment of a horse that has been crippled for two years is, at best, very slim.

So-called Scratches — Degenerated Skin.—J. G., Beach Grove, Tenn. So-called scratches, if not too inveterate, will soon be brought to healing by keeping the horse on a dry and clean floor, out of water, snow, mud and manure, and by making twice a day to all the sores a liberal application of a mixture of liquid subacetate of lead, one part, and olive-oil, three parts. If the affected parts need cleaning it is advisable to do it dry or without using any water. A thickening of the skin, caused by degeneration of its tissues, must be looked upon as permanent.

Diabetes.—C. S. Y., Wolf Creek, Mont. In our domestic animals diabetes, or an excessive discharge of urine, is most frequently caused by a consumption of muddy and dusty food or by food contaminated with fungous growths. If this constitutes the cause in the case of your heifer the first and principal part of the treatment would have to be a radical change in the diet of the animal. The fact that the heifer was served last summer has most likely nothing whatever to do with the disease, and beyond mentioning that you do not give any information whatever that may serve as a hint concerning the probable cause of the disease, and any treatment of diabetes will be in vain unless the cause is first removed.

Paralyzed Hogs.—L. M. B., Sewal, Iowa. Paresis, or paralysis in the hind quarters, of hogs may be produced by various different causes, as has been so often explained in these columns. The remedy, of course, consists in removing the cause, provided the same is known or ascertained and can be removed. As your communication gives no clue whatever as to the probable cause, and only says that the appetite of the paralytic animals is unimpaired, I can only say that among the possible causes swine-plague is excluded in your case; and as to others it can serve no purpose to enter into a discussion of all kinds of possibilities. I will, therefore, only mention three of the principal and most frequent causes; namely, improper food destitute, or almost destitute, of phosphates, lime salts and nitrogenous compounds, trichinosis, and direct injuries to the spinal column.

Half-breed, Full Blood, Pure Bred, Thoroughbred.—E. J. N., Panama, Nev. You are mistaken, but have been correctly informed. To take your own proposition: If a common (scrub) cow is bred to a full-blooded or pure-bred Black Polled Angus bull the calf will be a half-breed, because it belongs half to the pure-bred sire and half to the scrub dam; but it would be a one sixteenth Polled Angus if it had four generations back only one pure-bred Polled Angus ancestor, either male or female. On the other hand, if the progeny of a half-breed cow is always sired by a pure-bred Polled Angus, the eighth generation will not be strictly pure bred, because there is yet a strain of scrub blood, but as it is so very little, only a trace, it does not exclude from registration in all herd-books of blooded stock. Whether or not this applies to the Polled Angus herd-books I do not know.

Eye Disease in Sheep.—H. A. C., Manchaca, Texas. The eye disease of your sheep, according to your description, seems to be similar, or perhaps identical, to the infectious ophthalmia (keratitis) prevalent in certain localities among cattle, especially if grazing on commons or on dry and dusty fields, and exposed to the influence of bright sunlight. For cattle thus affected I have recommended the use of an eye-water consisting of a solution of either corrosive sublimate, 1 to 1,000 or 500, or of nitrate of silver, 1 to 250, in distilled water, to be applied by means of a so-called dropper (a small rubber-capped glass pipette). But as I have never before had to deal with a case of this disease attacking sheep I advise you to make a closer examination of some recent cases and see whether there is not some foreign body on the eyeball beneath the eyelids. If such should prove to be the case a timely removal of the foreign body would constitute the treatment.

Itching At the Poll—A Short Tail.—L. A., Ludington, Mich. An itching sensation at the poll as well as at any other part of the body may be produced by various causes; for instance, by several animal and vegetable parasites, an accumulation of filth, etc. As you have already used several things without much success it may be advisable to rub in on the poll, between the parted hair of the mane, a little gray mercurial ointment, to be washed off the next day with soap and warm water, and to repeat this treatment a few times once every other day. As to the tail,

it makes a decided difference whether the hair is simply whipped off on the traces, whiffletree and sides of the stall or whether they are falling out with the roots. In the former case the hair will grow again if the cause is only prevented from acting, but in the latter the case is much more serious because the falling out is due to a diseased condition of the roots, a condition which will be difficult to remove, and where the hairs have fallen out no new ones will appear. Such a horse sooner or later will have a so-called raitail.

Flexor Tendons Severed.—J. M. W., Elmer, N. J. There can be no doubt, according to your description, that one or both flexor tendons (probably both) were severed when your horse was injured. There are no muscles worth mentioning at the point indicated in your drawing. If the injured leg had been at once properly bandaged in such a way as to enable the lower joints to retain their normal position, and if then the horse had had strict rest and not been obliged to throw any more weight upon the injured leg than would have been supported by the bandage, an almost perfect restoration would have taken place in about eight to ten weeks. As it is now, the severed flexor tendons not united and the horse in consequence turning up the toe, a good bandage giving considerable support and to a certain extent replacing the function of the flexor tendons, especially if applied by a competent veterinarian, and strict rest to the animal for a sufficient length of time, may yet have a good effect, and though perhaps not restoring the leg to a perfectly normal condition, may prevent the animal from remaining a worthless cripple.

Swine-plague.—F. H. S., Seattle, Wash. Your neighbor's hogs, as well as the one you killed, had swine-plague, or so-called hog-cholera. It is an infectious disease, and the food you seem to be inclined to accuse has nothing to do with the outbreak. The infectious principle, the swine-plague bacilli, possess great vitality, and can survive outside the animal organism at least five years, or probably longer, provided the same are not deprived of moisture, and are not exposed to the effect of sunlight and to other influences absolutely unfavorable to their existence. Therefore you may expect to have to do with swine-plague year after year, or whenever you have swine not protected by having acquired immunity, unless you resort to a thorough cleaning of the premises on which the now diseased or dead hogs have been kept, disinfect everything possibly contaminated with the infectious principle, the swine-plague bacilli, and burn all such infected substances, such as straw, bedding, corn-cobs, manure, and all kinds of rubbish that cannot be reliably disinfected. Only if this has been done after the last case of disease has terminated either in recovery or death, you may, six weeks later, but not before May or June, procure healthy swine with a fair prospect of keeping them healthful, provided you see to it that they have no communication whatever, either directly or indirectly, with any diseased or infected hogs, and do not come in contact with anything, animate or inanimate, possibly infected with or being a carrier of the infectious principle. To subject hogs diseased with swine-plague to any medical treatment does not pay, and so, for obvious reasons, seldom is of any avail.

Navicular Disease.—A. D., Maches, Mo. About the causes of navicular disease please consult FARM AND FIRESIDE of November 15th. In addition to what has been said, there it may suffice to draw attention to the fact that a reckless cutting down of the quarters and thus throwing too much weight and concussion upon the navicular bone and the flexor tendons, and further, allowing the shoes to stay on too long a time without resetting, constitute some of the principal predisposing causes. "Nerving" is an operation which I would entrust to nobody but a competent veterinarian, and which is excusable only as a last resort. It does by no means effect a cure, but if well performed it deprives the animal of any feeling in the lower part of the leg, and thus, and thus only, removes the lameness, but it also, by destroying all susceptibility to pain, removes the sentinel on guard against all kinds of injury to which the foot and lower part of the leg may become exposed. Thus the horse may run a nail into the foot without perceiving it, or may otherwise injure the foot, and when the owner learns what has happened it usually is too late. Besides this, by cutting the nerves leading to the foot the process of nutrition will be very much disturbed and may become morbid to such an extent that the horn produced will be diseased and the hoof grow out of shape. If then the foot is injured in one way or another, and the injury is not promptly attended to, which is seldom the case for the simple reason that the horse does not show any indications of what has happened, the whole hoof is apt to slough off before the owner has discovered that something is wrong. "Nerving" almost invariably will sooner or later be productive of more or less serious and bad consequences, but how soon this will happen nobody can predict, because it altogether depends upon circumstances, and therefore a horse thus operated on may become worthless in a short time or may go and work tolerably well for a couple of years.

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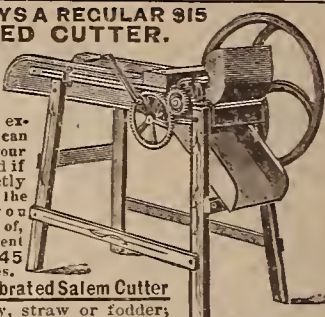
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With never a break in their rapid flow,
We watch them as one by one they go
Into the beautiful past.

As silent and swift as the weaver's thread,
Or an arrow's flying gleam,
As soft as the languorous breezes hid,
That lift the willow's golden lid,
And ripple the glassy stream.

As light as the breath of the thistle-down,
As fond as lover's dream,
As pure as the flush of the sea-shell's throat,
As sweet as the wood-bird's wooing note,
So tender and sweet they seem.

One after another we see them pass
Down the dim-lighted stair;
We hear the sound of their steady tread
In the steps of centuries long since dead,
As beautiful and as fair.

There are only a few years left to live,
Shall we waste them in idle strife?
Shall we trample under our ruthless feet
Those beautiful blossoms, fair and sweet,
By the dusty ways of life?

There are only a few swift years—ah, let
No envious taunts be heard;
Make life's fair pattern of rare design,
And fill up the measure with love's sweet wine,
But never an angry word.

—Restitution.

HOTHOUSE PIETY

THERE is a great deal of piety nowadays that never gets beyond the hothouse experience or stage. It is well tended there, however. Priestly fingers nip everything in the bud that shows itself contrary to his liking, while the church (not the gospel) pruning-knife clips off this branch and that, which would be likely to bear fruit distasteful to him if left to grow. And then they are watered (sparingly) with that which has been bottled at the duly authorized fountain from the regulation sprinkling-pot, which bears the proper brand; and so they grow(?) Poor, weak things, what will they ever amount to, except something to look at, and poor at that. If they only ever could (?) be transplanted, without disturbing anybody or anything, into God's whole outdoor, balmy air, onto the Abrahamic farm, and be watered from the skies, how they might grow when their roots once went down into and got hold of the promises.

But alas! this may never be. Yet there is supposed to be but one true vine, and all the rest branches that are desired to bear much fruit; and to this end the great husbandman and vine-dresser himself is suffered to attend to the fertilizing and pruning, where his understrappers will let him; and the fruit will be plenty and according to his liking, whether it suits anybody else's taste or not.

The church ought to be out into the highways and hedges after plants worth transplanting, not merely into the church, but into the heavenly kingdom, instead of spending all its precious time pruning, watering and admiring the few frail things they have got. Ten to one they can go out most anywhere and dig up something wild most any day of more account than those high-toned things they are making so much account of, and are only fit to look at. The church should be more than a winter hothouse, with a hired florist for a few weeks.—Chas. E. Copp, in World's Crisis.

THE PRAYER OF AGASSIZ

Great scientists are usually devout, reverent, thoughtful. Men of smaller caliber are sometimes flippant, skeptical and profane.

The "Christian Union," speaking of the speech of Prof. Agassiz, at the opening of the Anderson School of Natural History, says: "After a few opening words, felicitously suited to put all their minds into fellowship, Agassiz said, tenderly and with touching frankness:

"I think we have need of help. I do not feel that I can call on any one here to ask a blessing for us. I know I would not have anybody pray for us at this moment. I ask you for a moment to pray for ourselves."

"Upon this the great scientist—in an age in which so many other scientists have concluded that praying is quite an unscientific and very useful proceeding—bowed his head reverently; his friends and pupils did the same; and there, in a silence that was very solemn and very beautiful, each spirit was free to crave of the Great Spirit the blessing that was needed.

"For our own part, it seems to us that this scene of Agassiz and his pupils with heads bowed in silent prayer for the blessing of the God of nature to be given to that school then opened for the study of nature is a spectacle for some great artist to spread out worthily upon canvas, and to be kept alive in the memories of mankind. What are coronations, royal pageants, the parade of armies, to a scene like this! It heralds the coming of the new heavens and the new earth—the golden age when nature and man shall be reconciled, and the conquests of truth shall supercede the conquests of brute force."

YEARS WELL SPENT ADD BEAUTY TO THE FACE

Nature wills that age shall add beauty and dignity to that which is good—but it shall destroy that which is inferior. The years that wither the weed add to the majesty of the oak. Aged one hundred years, the elephant is a ponderously pleasing and impressive beast, whereas the pig, charming to the eye in his pink-and-whiteness at birth, is a horrid shoat at six months and increasingly atrocious to look upon thereafter.

Of the human face it is particularly true that years embellish the good and damage the bad. For proof, study the face of Gladstone at various ages. All of the newspapers have shown him at twenty, at thirty, and so on up to the time of his death. Can you not see how with each decade his face improved? Time added wrinkles and whiteness of hair. But the wrinkles gave strength and character, the white hair venerable dignity, and with the years as they passed came constantly increased strength and power. The mouth grew firmer, the deep-set eyes more impressive, the bearing more majestic.

And do you know why? Because in that head there dwelt a brain devoted to study, to intellectual work, to the interest of the race. Ambition dwelt there, and something of the politician's planning. But the controlling force was a desire to be of use to mankind. The one interest was interest in the nation, the one passion to battle for what the mind conceived to be right.—New York Journal.

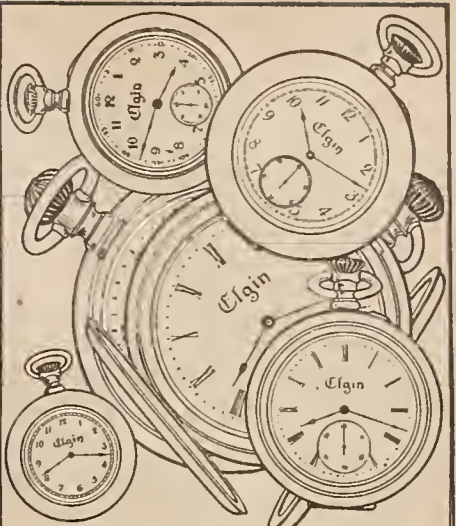
All we have willed or hoped or dreamed of good shall exist:
Not its semblance, but itself: no beauty, nor good, nor power
Whose voice has gone forth, but each survives for the melodist
When eternity affirms the conception of an hour.
The high that proved too high, the heroic for earth too hard,
The passion that left the ground to lose itself in the sky,
Are music sent up to God by the lover and the bard;
Enough that he heard it once; we shall hear it by and by.

—Robert Browning.

SAINTLY FACES

Sometimes, in passing through a crowd, we see a face that attracts us by its sweetness of expression. Perhaps it is an old face, crowned with a glory of hoary hairs; yet love, joy and peace shine out of every dot and wrinkle in it. Sometimes it is a young face that beams with health and purity and beauty. But whether old or young, when we see that unmistakable soul light in a face we know that the heart behind it is pure, the life good and that the body thus illumined is the temple of the Holy Spirit. Keep the mind occupied with good, pure, useful, beautiful and divine thoughts.

If the incurable croaker must croak, let him retire to his closet, close the door and croak to himself. The present is a time of hope, and let us have no dyspeptic prophecies to mar the sanguine spirit of the hour.



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"SONGS OF OUR NATION"

"Let me make the songs of a nation, and I care not who makes its laws."

At the present time, when all true American hearts are stirred with patriotism and loving thoughts of the brave soldier boys who have left home and friends at the call of their beloved country, the patriotic songs of our nation seem to be on every lip. We hear them everywhere—in the church, the school and the home, even down to the little ragged urchin, who whistles some national air, scarcely knowing that he does so, yet vaguely conscious of a nobler feeling stirring in his little breast as he trudges along the street.

Taking everything of this sort into consideration, a little knowledge as to the origin of these songs may not come amiss.

"Yankee Doodle" is perhaps our oldest national song, but its origin is so doubtful that very little can be said about it. As some one has remarked, it probably "composed itself," as the Germans are in the habit of saying about some of their "folk-songs." The air is said to have been taken from an old English nursery ditty. Suffice it to say, however, that the martial strains of "Yankee Doodle" are so associated with the deeds of American valor that they always awaken an echo in the hearts of all loyal American citizens.

Just a century ago one of our first patriotic songs was written by a young lawyer named John Hopkinson. He was born in Philadelphia in 1778, becoming quite a noted lawyer. He died in that city in 1842.

A young actor by the name of Fox was to have a "benefit," but war with France at that time seeming inevitable, the people did not appear to be very much interested in anything else, so the results of the performance were not promising. Fox was in despair, but, happily, a bright idea occurred to him, and hastening to his friend Mr. Hopkinson, he asked him to write some patriotic verses to the tune of the "President's March." His request was complied with, and after having advertised the matter Mr. Fox sang "Hail Columbia" to a very enthusiastic audience on the night of the "benefit."

Francis Scott Key was the author of the next song of our nation which is a universal favorite. It is hardly necessary to relate again the circumstances which brought "The Star-spangled Banner" to life.

Mr. Key, like the author of "Hail Columbia," was also a lawyer. He was born in Frederick county, Maryland, in 1780. He practised law in Frederick for some time, but finally became district attorney for the District of Columbia. It was while effecting an exchange of prisoners during the war of 1812 that Key wrote the song that has made his name famous. Being detained on the British vessel "Surprise," he witnessed the bombardment of Fort McHenry, and every lover of the flag can well imagine his feelings when, after a night of anxiety, he saw the banner of American freedom still floating aloft. It was then, on the back of an old letter which he chanced to have with him, that he scribbled off the words of "The Star-spangled Banner."

"What is that which the breeze o'er the towering steep,
As it fitfully blows, half conceals, half discloses?
Now it catches the gleam of the morning's first beam,
In full glory reflected now shines in the stream:
'Tis the Star-spangled Banner, oh, long may it wave
O'er the land of the free and the home of the brave."

Near the entrance to Golden Gate park a millionaire from San Francisco caused a magnificent monument to be erected to Mr. Key's memory, and during the present year, on June 14th, another monument has been unveiled at Baltimore.

Key was buried in the cemetery of his native city, and there tourists visit his grave, over which, from a steel pole, the Star-spangled Banner, the flag of his country, is always floating.

"My Country, 'Tis of Thee" was written by Samuel Francis Smith. He was born in Boston in 1803. Some years after being graduated from Harvard University he was

ordained to the Baptist ministry. He wrote a great many hymns, and this song, which is somewhat similar to a hymn in style, was first sung at a children's church celebration. He was a classmate of Oliver Wendell Holmes, who refers to him in his reunion poem called "The Boys" in the following words:

"And there's a nice youngster of excellent pith;
Fate tried to conceal him by naming him Smith!
But he chanted a song for the brave and the free—
Just read on his medal, 'My Country, of Thee.'"

Dr. George Frederick Root was born in Massachusetts, and it is to him we owe the popular songs, "Just Before the Battle,"



FIG. 1

Mother," "Battle Cry of Freedom" and "Tramp, Tramp, Tramp, the Boys are Marching."

Now among all these names of famous men comes the name of a woman, to whom we are indebted for the beautiful "Battle Hymn of the Republic."

Julia Ward Howe was born in New York City on May 27, 1819. The above-mentioned hymn, together with "John Brown" and other patriotic ballads, has made her name famous throughout the land.

Many of our soldier boys carry in their hearts the beautiful words of her hymn:

"In the beauty of the lilies Christ was born
across the sea,
With a glory in his bosom that transfigures
you and me.
As he died to make men holy, let us die to
make men free,
While God goes marching on."

MABEL DOLORES HAUCK.

DAINTY PHOTOGRAPH-FRAMES

No. 1.—Cut from pasteboard the frame—oval, square, heart, diamond or leaf shaped; in fact, any pattern you desire. Cover with a layer of cotton batting, next with a piece of old silk. Take the violets from your summer hat, sew on regularly until the silk is entirely covered and the frame is a mass of violets; turn. With a little glue paste a lining over the back, thus hiding every trace of work. Place the photograph you wish inside and secure by passing long, coarse stitches over the corners. If you prefer use crape-paper violets, and in any case spray with violet perfume.

No. 2.—Cover the frame with white or pale green satin. Tack on the upper left-hand side a cluster of artificial roses. Tack another bunch on the lower right-hand side. Select roses with long enough stems so that you may tie with a bunch of pretty ribbon.

No. 3.—A plain but handsome frame shown the other day in the rooms of an art club was made of leather exquisitely fastened on and gilded.

No. 4.—If you live in the birch-bark region, what would be more acceptable to your less-favored sisters than a photograph-frame covered with birch-bark, or if you dwell in the sunny South, what more delightful than one of gray moss? Take a fan; cover thick with gray moss, fasten your photograph on it, and adjust the moss so as to conceal the

edges of the picture. Braces for these frames may be easily made from a strip of cardboard and glued to the back of the frame. Easels of sweet-gum or orange wood, the latter oiled and polished, make most suggestive and valued gifts from southern lands.

No. 5.—One of the prettiest conceits in picture-frames shown this autumn was seen in a woman's club-room recently, and may readily be copied by any one who can use a brush. If you can't use the camels'-hair there is certainly some one in the vicinity who can, and who would for a small remuneration. At all events the frame is richly worth suggesting to you. Half a dozen heart-shaped frames were cut from stiff cardboard. They are first covered with cotton, then with white silk or satin. Six different photographs of the same person were then inserted in the six different frames, and the lining pasted on securely. Cupid was painted on the edge of the lower heart, and he was looking for game. The next heart had an arrow safely landed in it. On the third Master Cupid stood, his bow relaxed, and the fourth showed him peeping over the top of the heart into Beauty's face. The fifth showed him with an arrow in his own side, and the sixth holding a laughing photograph, and had these words, in quaint lettering, "Turn about is fair play."

These frames were delicately secured on a strip of white satin ribbon, edged with a heavy gilt cord, heavily knotted at the corners, and having loops by which it might be suspended.

Of course, this was made by an artist, but the idea might be modified and used to great advantage. If one did not feel equal to the Cupids, lettering is very easy and cute mottoes easily suggested themselves, as: "Heart after Heart;" "Deep in My Heart Thy Image Dwells;" "Fond Heart, Be My Abiding-place;" "This Heart, 'Tis Only Thine;" "Hearts are Trumps;" "Come Make Thy Home in My Fond Heart."

CARRIE O'NEAL.

COLD-WEATHER NIGHTWEAR

In the more modern house, where steam heat keeps the sleeping-rooms, as well as all of the others, of one temperature, the necessity for warm nightwear is not so great; but in the average house, where the temperature of the sleeping-rooms is considerably below that of the living-rooms, care in the selection of children's nightwear is essential.

Fig. 1 illustrates a very convenient and comfortable closed night-gown for the small infant. It is not cumbersome, nor does it interfere with any attention the child may require, and yet there is no possibility of the little limbs becoming uncovered and exposed to the cool air.

Fig. 2 shows how to eventually prevent the small boy or girl from uncovering during the night. Even though the bed-clothes may be kicked aside, still the night-



FIG. 2

wear forms a complete covering which no amount of kicking will remove.

Fig. 3, a pair of pajamas, is also recommended as nightwear for the boy who is still small, but who has outgrown in years his adaptability to the regular night-drawers.

Canton flannel in its several weights is an excellent material to use for children's winter underwear, as it is soft and warm.

EMMA LOUISE HAUCK ROWE.

HOW TO TREAT A COLD

A doctor with a mathematical turn of mind once estimated that in the United States alone there was a yearly aggregate of two hundred and fifty millions of colds, and this statement was supplemented by the still more startling declaration that not more than one in ten thousand received proper treatment.

Colds are of such common occurrence that they seldom get the attention they should have. We suffer, but comfort ourselves with

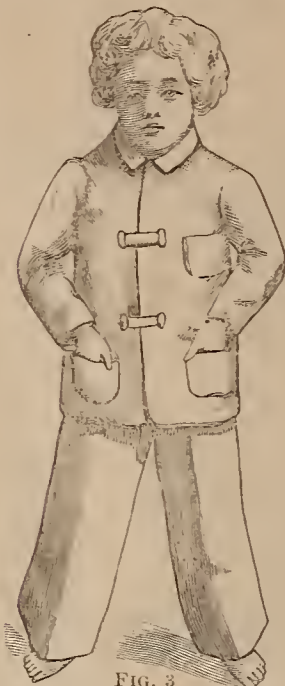


FIG. 3

the thought that "it is only a cold," and are not disturbed by much knowledge of the evils that are likely to follow in its wake.

It is more comfortable, and far more sensible, to take measures to get rid of a cold as soon as it makes its presence known. It is not a difficult task if you go about it in the right way. Indeed, it is a wonder that the common dilatory methods of treating colds do not more frequently end disastrously. There is no doubt that many of the illnesses which afflict humanity might be traced directly to some cold that was improperly treated.

To treat a cold successfully one should make a business of it to the exclusion of everything else. The following instructions, if carefully carried out, will break up the worst kind of a cold, without after bad effects; but there must be some one to act as nurse and doctor. The patient cannot well treat himself.

Begin the treatment by giving the patient a dose of Epsom salts in hot water. The size of the dose must depend on the patient. He must take just enough to make the bowels move freely. Taken in hot water salts act very quickly.

When the effects of the salts has worn off the patient should be undressed in a warm room from which all drafts have been excluded, and required to sit in a tub of warm water as hot as can be borne. Get your largest wash-tub, but do not put in much water at first. Three or four quarts will do to start with. If the patient cannot sit in it and put his feet in at the same time, provide a foot-bath also. Now place a blanket around his shoulders in such a way that it covers him completely—tub, foot-bath and all. Pin it closely about his neck, and fold it over so that not a breath of cold air can get in anywhere. Give a cupful of hot, strong, sage-tea, and place a towel wrung from cold water around the head. Fold it lengthwise, and bind it around so that it comes over the base of the brain, the temples and the forehead. This should be changed every few minutes, for the head must be kept cold. Give several cupfuls of the sage-tea while the patient is in the bath.

Hot water must be gradually added to that in the tub and foot-bath. Use a dipper for the purpose, and pour it carefully in at one side, stirring the water with your hand as you do so. Do not expose the patient more than is absolutely necessary while adding the water. Keep it as hot as possible, and let the patient remain in it until drops of perspiration roll off his body. Have the bed open, and a pair of warmed blankets spread in it, and as soon as he perspires freely help him to leave the bath, with the blanket still around him, and get him right into bed. Do not wait to use a towel. Cover him closely and let him perspire a little longer, then with a cloth saturated with alcohol go over every part of the body. Use plenty of the alcohol, for it will give strength and prevent taking more cold. Do this part of the work under the bed-clothing, so as not to expose the patient to the cold air. When it is done rub him with a dry towel and remove the blanket which he has had

next his skin all the while. He is now ready for a nap. If this has been done in the evening he will need nothing more before morning. During the day let him sleep, then give him a bowlful of rich broth upon awakening. A few small doses of camphor will be of benefit, one drop on a lump of sugar or five drops on three teaspoonfuls of sugar, and five teaspoonfuls of water added. Give this in teaspoonful doses one hour apart. Keep the patient in bed for twenty-four hours after this treatment, no matter how well he may feel, and give him a sponge-bath of alcohol and cold water before allowing him to dress and go about the house. Use one part alcohol to two parts water for this bath.

We have yet to see a cold that cannot be cured by this treatment, and it usually leaves the patient feeling better than before he took it.

EUPHEMIA WOODS.

THE SENSELESS AND VULGAR CUSTOM OF RICE-THROWING AFTER THE NEWLY MARRIED

How many of those who follow it have ever thought of its significance, its dangers and discomforts?

A paragraph has lately made the rounds of the newspapers describing the painful experiences of a bride after whom rice was thrown, a kernel of which lodged in her ear. As she could not dislodge it at once, and very likely her efforts to do so set it farther in, it began to swell, owing to the natural moist secretions of the passage that conducts sounds to the drum of the ear. No more sensitive part of the human organism can be found, and by the time she arrived at the end of the day's journey it had become intensely painful and the services of a surgeon had to be called for before it could be dislodged, when it came out in fragments; and had it not been possible to obtain help no one can say that it might not have caused irreparable mischief; and thus was spoiled the enjoyment of what should have been the happiest hours of the young woman's life.

A few months ago the following took place on a railway-train running into New York when it was more than a hundred miles from its destination. A couple came in and took their seats, and from their dress and general appearance, and that indefinable something no one can describe, probably every other passenger said to himself, "bride and groom." At the next station, a few miles farther down the road, there was an irruption of young barbarians—for no other word fits them—with a small pail, from which, having entered at the back door of the car, each had taken a large handful of rice, and proceeded to discharge it on the backs and heads of the unsuspecting victims. The bride, so serene a few moments before, looked around with terror and annoyance on her features, and as much of the rice had lodged in her loosely coiled back hair, of

late high-growing sweet-peas—they were just beyond her reach; she turned over a peach-basket that chanced to be at hand, stepped up, and swiftly came down, but could not get up again, having broken her leg. This is only one of a score of instances that have occurred in this vicinity, and probably an inquiry would show that this is no exceptional region. Trunks, chairs, bureaus, wash-stands, etc., have been the offending deceivers. One lady of seventy-six undertook to inspect plumbing from a wide pantry-shelf—it fell, and she had an ununited fracture of the thigh for a dozen years after, till her death. Men are certainly more cautious, and women forget that as we grow older our bones become more brittle. Probably there is not a village in this whole broad land which has not at least one example that would illustrate the contention that an old lady's temptation is to stand on something never intended for the purpose. A few minutes spent in finding some suitable means of raising one's self would often forestall years of infirmity if not actual helplessness.

H. M. PLUNKETT.

BEFOREHANDEDNESS

Yes, it is a new word I've coined. Yet if the quality for which I mean it to stand could become a part of every housekeeper's stock in trade many of the vexing problems of daily living would be satisfactorily solved.

Winter is the easiest time for women upon a farm. To be sure, the breakfast-hour is usually later, thus shortening the working hours of the day. Still, as the children carry their midday meal to school, and a hot supper is a necessity, a luncheon can take the place of dinner.

Now, beforehandedness enables the average woman to find time for sewing, reading, fancy work and visiting. It also does, during these days of comparative leisure, many tasks which otherwise must be done amid the scorching heat and the hurrying work of summer.

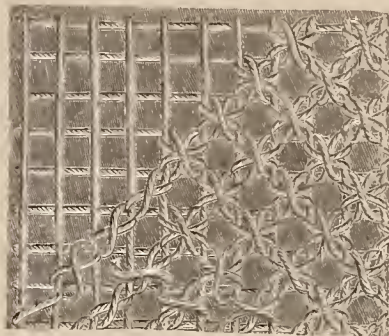
Do you ever stop to think how much of the housewife's time must be given to the preparation of food? In the winter many articles of food can be cooked when one must be in the kitchen, and used as needed.

When you make biscuits double your usual recipe. The next morning or evening dip the biscuits in cold water, place in a pan, cover, and warm thoroughly in a moderate oven. You will find them as good as when first made. Graham gems can be treated in the same manner. Roast a large piece of beef. It can be sliced or chopped for sandwiches for school lunches, can be served cold, warmed in a brown gravy, hashed or made into a neat pie or croquettes. Squash, cabbage, dried corn and beans can be warmed so as to be as good as at the first cooking. Of "warmed up" potatoes it is unnecessary to speak here. Every housekeeper has her ways of preparing them, and it depends on these ways whether they are good or bad.

fill with custard, stewed apples or canned berries, cover with a meringue, and bake quickly. A suet pudding can be boiled or steamed while you are doing your other cooking. A part of this set away will keep indefinitely, and can be warmed by slicing and placing in the steamer.

Beforehandedness is valuable in regard to other matters besides cooking. It enables the housewife to make during the winter and early spring the school dresses, work dresses, aprons and bed and table linen needed for summer. It also utilizes odd minutes to sew the carpet-rags as the worn-out garments come from the wash, thus reducing the work of "getting a carpet ready for the weaver."

Beforehandedness lightens the spring house-cleaning by looking over the contents of drawers, boxes and closets before the



time to commence the regular work. Besides this it prepares cushions, lambrequins and curtains for this busy season.

Then sudden illness is never quite so appalling in homes where this quality reigns. There are a few simple and tested remedies always on hand, as well as soft flannels and worn muslin for immediate use. While not advocating a constant dwelling upon the probability of coming illness, yet, as it usually makes its appearance sooner or later in all well-regulated households, it is well to be prepared for it.

It's the worry and hurry, the bustle and striving, that makes the work of a farmer's wife particularly hard. Some of this may be avoided. No amount of planning will make it advisable to leave the cream when it is ready for the churn, or the bread when it is ready for the oven. However, there are things which can be made ready against the time of need, and to do this intelligently—that is beforehandedness.

HOPE DARING.

TOILET FURNISHINGS

Now that Xmas is over and the December rush rested from, I determined to make myself some of the things I wished some one would think of for me—but they didn't.

I wanted a pincushion. I was tired to death of running my fingers into needles, tacks, collar-buttons, safety and hair pins which found their way into my pin-plate, and which always seemed to have in it everything but the pin I wanted in such a hurry, so I saw one that I liked and immediately copied it, using yellow silk and making the top of bolting-cloth covered with lace braid and a few fancy stitches. The cushion was easily procured at a fancy-store, and finished with a double ruffle of the silk. Now I expect to find a pin when I want one. Then I got a piece of open canvas in white, which I crossed with yellow silk, like the illustration, and finished the ends with lace, which I put over yellow silesia for a cover to my bureau. Little lace mats over yellow were laid at each side.

A pretty low-sided basket in heavy straws stood at one side for my brush and comb—which came from a dear one last Christmas—which, though of silver, he requested I should use every day of my life.

Two large cut-glass bottles I took and filled with my favorite perfume and toilet-waters. A puff-box for powder stood at another side. Altogether I was quite pleased with it when I was through with it. So some of you might undertake it for your mother, either for a valentine or a birthday surprise. Try it.

B. K.

THE GRACEFUL PORTIERE

Nothing adds more to the appearance of a room than graceful draperies. In an elegant room Bagdad, of course, obtains precedence over all other sorts. In less pretentious homes beautiful chenille or damask curtains are used, and cost from three to five dollars.

Very artistic and inexpensive are the bamboo portieres, and they certainly add

a charm indescribable to a room. They are also invaluable to hang before a window which presents an objectionable view, for while they admit the light, they effectually screen from sight that which lies beyond.

Lovely draperies may be made from old silk scraps and worn-out silk dresses. They should be cut into narrow strips, and sewed together exactly as you would carpet-rags. Taste will guide you in harmonizing colors. You can sew colors by themselves and have stripes, or if you prefer, your portieres may be of the hit-or-miss variety. A lovely pair seen some time ago had a body of soft old gray silk interspersed with broad Roman bands. These curtains may be woven by a regular carpet-weaver, and are so inexpensive they may be made by any one who wishes them.

Again, the same idea might be followed out in soft wools. It would not, of course, be so handsome or artistic as the silk, but could be made very effective. Some weavers have the knack of completely hiding the chain. If your weaver is that skilful the curtains will far more than repay you for any time spent on them.

Another very inexpensive and pretty portiere may be made from corn. Select and shell half a dozen ears of yellow and red corn. Soak until the seeds are quite soft and may be easily pierced with a needle. Then cut your threads the length of the door in which you wish to place your portiere, allowing a foot and a half for shrinkage, and fastening. This may be a little long, but rather too long than too short. Use either wrapping-cord or black thread No. 8. String the yellow corn by itself and the red by itself. Fill each thread entirely. Lay out to dry, and when entirely dry hang in your doorway either by fastening over a strong heavy wire and occasionally securing this wire to the door-casing by strong staples or by wrapping around the transom-piece. Place the strands in groups of from three to five (as your taste dictates) of each color until the door is filled, taking care that it is done regularly.

White corn is sometimes dyed and used, but the effect is less pleasing and harmonious than when left the natural color.

The effect may be beautifully varied by arranging the corn so that a band of the red corn may run across a portiere of yellow, or vice versa.

Those living in the buckeye region may have recourse to the buckeyes, and a portiere of buckeyes, or of buckeyes and corn arranged alternately, can be made by proper treatment really very pretty.

Select small buckeyes. String, say twelve inches of corn, then a buckeye; then twelve inches of corn, then a buckeye. In the next string put on six inches of corn, then a buckeye; then twelve inches of corn, then a buckeye. You will alternate the corn and buckeyes at regular intervals, and will prove very effective. If you wish you can run the buckeyes across so as to form heavy bands at the top and bottom. Again, you can use the red and yellow corn and brown buckeyes so as to form circles or diamonds or other geometric designs, if you are willing to take time and patience and lay the strings out on the floor. By doing this you can make no error.

M. M. M.

I OFTEN WONDER WHY 'TIS SO

Some find work where some find rest,
And so the weary world goes on;
I sometimes wonder which is best;
The answer comes when life is gone.

Some eyes sleep when some eyes wake,
And so the dreary night hours go;
Some hearts beat when some hearts break;
I often wonder why 'tis so.

Some wills faint where some wills fight,
Some love the tent, and some the field;
I often wonder who are right—
The ones who strive or those who yield?

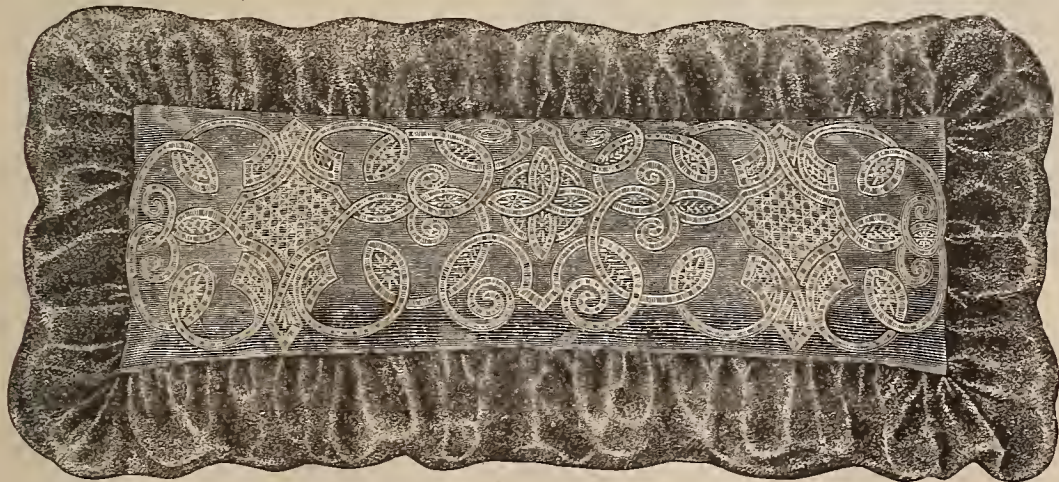
Some hands fold where other hands
Are lifted bravely in the strife;
And so through ages and through lands
Move on the two extremes of life.

Some feet halt where some feet tread,
In tireless march, a thorny way;
Some struggle on where some have fled;
Some seek when others shun the fray.

Some swords rust where others clash,
Some fall back where some move on,
Some flags furl where others flash
Until the battle has been won.

Some sleep on while others keep
The vigils of the true and brave;
They will not rest till roses creep
Around their name above a grave.

—Father Ryan.



course, as the car got in motion again, it sifted down her back; and the groom's collar fitted so loosely that he had to endure similar tortures and there was no way of relief—simple endurance was all the poor creatures could oppose to the miseries of the situation. The next man who proposes to throw rice over a young couple—presumably his friends—should put a dozen kernels of rice in his shoes and insert the bare feet and walk a mile. Then he will know the discomfort his senseless action will be likely to entail.

This custom probably originated in the East, but wherever it came from it should be abandoned in a refined community, as its original meaning is "may you be fruitful," and its practice thoroughly vulgar.

The temptation of elderly ladies to step upon and try to stand upon something that was never intended for that use had a new illustration in the case of a lady in Lenox the other day. She wished to secure a few

Soup for two meals can be made as easily as for one, and warmed. When boiling rice, enough can be cooked for a pudding to be prepared any time within two or three days. If hot apple-sauce or baked apples are served for supper, enough to serve cold can be made ready in a very short time. Of course, the stock of jellies, jams, pickles, preserves and canned fruit in your cellar is a result of this same beforehandedness.

This rule is especially useful in regard to baking. Cookies, doughnuts, crullers, fruit-cake or any rich cake can be kept for some time. Notwithstanding all that is said about the keeping qualities of mince pies few housekeepers at the present day care to follow the example of their grandmothers and bake enough at one time to last all the winter. If fresh pie is cared for, bake one or more crusts for one-crust pies when doing your Saturday's baking, and put them in a cool place until the other pies are gone. Then

A GOOD PRACTICE

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KEEPING THE CHILDREN ON THE FARM

If we believe that there is no happier life than may be lived in a country home, let us act as if we believed it and try to make the home life on the farm so comfortable and happy that our children will not leave it at the first opportunity. Many parents make the great mistake themselves of dwelling on the hard work of farm life, losing sight of its many advantages and blessings, until their sons and daughters decide to seek some other occupation. In too many cases the farmer has become a chronic grumbler about farm-work, and is always talking of hard times and economy, until the children, instead of learning to love farm life, are educated away from it.

The strength of a nation lies in the homes of the land, and pre-eminently in the farm homes. It is from these our wisest statesmen and greatest men have come. If children are led to look at the beauties of plant and tree, of brook and stone, of hill and valley, to be interested in all the wonders of insect, animal, bird and plant life around them, the work of the farm will never seem drudgery to them.

All healthy children are full of activity and are always busy. Turn this energy to account, not by keeping them ceaselessly running errands and doing work which their elders shirk, but by giving them something of their own to care for and let them reap some benefit from their work. If they take all the care of a lamb, a calf or colt, let it be truly theirs and not, when it is ready for market, sell it and pocket the money without so much as a thought of their rights, as is too often done. Let them plant a fruit-tree or vine and do as they will with the fruit. Let them experiment with choice breeds of chickens, raise ducks and pigeons, or rabbits if they like, only making them responsible for the care and letting them reap the benefits if there be any. Every child is better and happier for having some responsibility and some regular work. They enjoy thinking that they are helping in the general work as well as doing something for themselves.

Make the home just as bright and happy as it is possible for you to do, but let it be a country home with comfort, simplicity and hospitality pervading its every part—a home where the family loves to stay and friends delight in coming. In winter be sure that light and heat abound, and in summer that shady trees, vines and flowers add to its beauty. But the comforts of the body are not all. Provide food and recreation for the mind. Let the best books, magazines and newspapers be always in the home, and if the children show any taste or talent for music do not deny its cultivation. A musical instrument will add much to home's attractions to a music-loving girl or boy, and help to smooth many rough places.

If home is a pleasant place for the children they will delight in sharing it with their companions. Do not deny them the pleasure. Remember your own youth, and, in fact, don't let it slip away from you, but keep your heart so young that you will enjoy the society of young people, and they will never want to push you into the background, but you will always be welcome in their merry-making, and both they and you be the happier for it. The parent who has the strongest hold on the children's hearts and exercises the greater influence over their lives is the one who enters into all their studies, their interests and their amusements; who is, in fact, a sympathetic comrade.

Let love be the corner-stone and foundation of the home; then let every member of the family do his part in making the home, keep fretting and fault-finding carefully shut out, and an ideal home will be the result. A home to which the children will ever look back with loving tenderness will exert a lasting influence over their lives, and they will seek to build others of like character. The influence of a true, happy home can hardly be estimated, it is so far-reaching and ever-widening.

MAIDA McL.

GOOD LIVING

While seated in a restaurant recently I was the involuntary listener to the remarks of two young ladies who had taken their midday lunch at one of the largest and most fashionable hotels in our own capital city. They were freely expressing regrets because they had been served with the same things they were used to at home. They seemed to think that potatoes, tomatoes and

turnips should have no place on the table of a first-class house charging first-class rates.

I have found that well-cooked, daintily served dishes are the specialty of all the first-class hotels in the United States. Fancy dishes will be prepared and charged for if ordered. The regular dinner does not usually consist of such dishes.

The average housekeeper serves as good meals as can be found in the best hotels. This is especially true as regards quality of food. Sometimes the cooking and serving is not what it should be. Take, for instance, beefsteak; it should never be fried in grease, either lard, suet or butter. Different kinds of steak require somewhat different treatment in cooking. Sirloin steak should not be overdone, but rather rare or slightly so. Most other kinds of beefsteak should be well cooked. A few experiments along this line will be useful to the housekeeper.

The following method of preparing sirloin proves very satisfactory. The steak should be cut about an inch thick. Heat a clean, dry frying-pan very hot, and put in the steak, which will stick at first. As soon as it loosens turn the steak over. Turn frequently, until the meat is as well done as desired. Take up on a hot platter, and sprinkle over it evenly the proper amount of salt. Drop bits of butter over the steak. A few sprigs of parsley and small squares of toast arranged on the edge of the platter adds to the dainty appearance of the dish. Do not salt any steak either before or while cooking, as the salt hardens the fibers of the meat and extracts the delicate nutritive pieces. These juices are wasted unless gravy is made.

I have frequently seen as many as fifteen well-cooked dishes on the table of a well-to-do farmer.

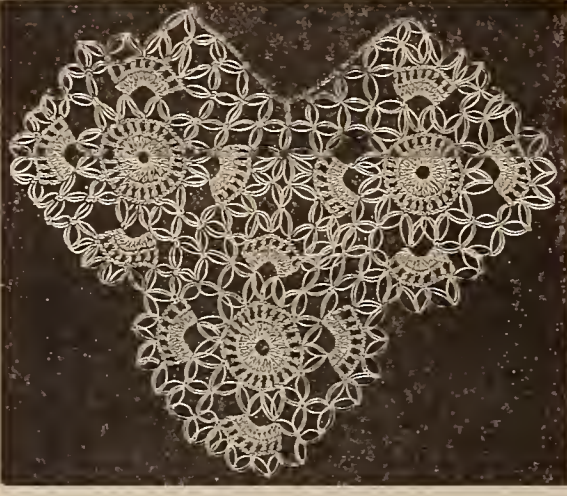
Have a variety by all means, but do so by having fewer dishes at each meal, but varying them from meal to meal.

No one has a better chance for dainty, economical living than the farmer. He has land. Why not all kinds of fruit? However, farmers are beginning to live up to their opportunities in this line, and I am anticipating some of the good things of the farm the coming summer when I take my vacation, if I can afford to take one.

LUCY C.

CORNER OF HANDKERCHIEF IN FAN-WHEEL LACE

Make a chain of 10 st; join.
First round—Ch 4, 1 tr in ring; * ch 1, another tr in ring; repeat from * 23 times, ch 1, catch with sl st made under ch 4.



Second round—Ch 5, 1 tr in first ch 1 of previous row; * ch 2, 1 tr in second ch 1 of previous row; repeat from * 20 times, ch 2, fasten with a sl st in ch 5.

Third round—Make 2 knot st each about one third of an inch long, catch with sl st in first ch 2 of previous row; * knot st, miss 2 tr, sl st in next ch 2; repeat from * until there are 12 points of 2 knot st each, make 1 knot st, catch with sl st in center knot of first point.

Fourth round—** ch 8, sl st in center of second point, ch 3; turn the work, and make 15 tr in ch 8, ch 5; turn work, miss 2 tr, 1 tr between next 2 tr; * ch 2, miss 2 tr, 1 tr between next 2 tr; repeat from * 5 times, making 7 open spaces, 2 knot st, sl st in center of third point, 2 knot-st, sl st in center of fourth point; repeat from * There will be 4 fans and 8 points around the wheel. Now work to top of first fan with sl st.

Fifth round—Make 24 points of 2 knot st each, arrange these so there will be 3 points over each fan and 3 points between every 2 fans. Join the wheels with crochet-hook while making them, or with needle and thread after they are made. Make a row of knot st points for a heading and connect these points with a chain. Arrange the corner as see in the illustration.

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A GIRL FARMER

By Annie M. Burke

CHAPTER I.

JOEY MADISON drove his stalk-cutter up to the fence, and stopped the team.

"Hi, there, you fellows!" he shouted across the fence, "how's plowin' this mornin'?"

"Mean, mighty mean!" came the answer back. "Plows won't scour worth a cent. How's stalk-cuttin'?" And the two McFarlan boys came up on the other side of the fence with their turning-plows.

"Oh, stalk-cuttin's good enough," replied Joey, "only I hate this machine I've got. I want a double-row cutter. And my old mare here won't keep up. I'd like to larrup her!"

Then Joey moved in his stalk-cutter seat, and leaning over toward the McFarlan boys as far as he could, he said, in a low, eager voice, "Say, hoys, did you see this sunbonnet going round the field over here all mornin'?"

"Should say we did!" cried the younger McFarlan boy. "Ned here ain't done a thing all mornin' but watch her and talk about her. He's got his neck about twisted off turnin' 'round, an' he's so taken up that he let me run into him twice!"

"But who on earth is she, boys?" Joey wanted to know. "And what's she doin' the farmin' for? Where'n creation's her dad, that he's got her out cuttin' the stalks?"

"She ain't got no dad, I guess," said the elder McFarlan boy. "Don't you know they're that Gordon family that bought ole Frazier out? They're related to the Grahams that live over near you there. This girl bought the fifty acres herself—belongs to her. Least that's what Mr. Graham says."

"B'lieve I did hear it was a girl bought ole Frazier out," said Joey. "But she can't be intending to do the farmin' herself, can she, hoys?"

"She's goin' to do all she can of it, I guess," said Ned. "They say she's got a hoy engaged to harrow and plow, but she rides the stalk-cutter herself, an' she's goin' to ride the seeder an' corn-plauter, 'cordin' to what the Grahams were sayin'."

"Ain't goin' to pay for any work she can do herself, you see," put in the other McFarlan boy. "Well, that's the way to make farmin' pay, I don't doubt. I saw her out doin' up the chores herself one day as I came past. She was throwin' corn to the shoats just like a man."

"Beats the Dutch!" ejaculated Joey. "Bet a dollar she's an old maid, boys! No nice girl 'ud undertake such a job."

"I don't know about that!" said the younger McFarlan boy. "I was close to her once. I couldn't see her face for that sunbounet, but she had a dandy shape, boys—round, neat waist an' nice shoulders. No, I don't believe she's an old maid!"

"Of course she's an old maid," asserted Joey. "No nice girl 'ud go tearin' over a farm like that! I know the women do work in the fields in some places. I've seen 'em—up North, but it's an unheard-of thing 'round here, and that girl knows it, but she doesn't care. She's one of these know-it-all-myself old maids. Bet a dollar she is!"

In the meantime the young woman over in the neighboring field went steadily on with her work. Several times she passed near them, for her field bordered upon both of theirs, but she never once turned her sunbonnet in their direction. Young farmers gossiping over a corn-field fence evidently had no interest for her.

"I say, boys, that's a good team she's got, anyway," remarked Joey presently, after having stared hard at the girl the last time she passed.

"You bet!" said the younger McFarlan boy. "It's an A1 team. All her animals are in good shape, an' she's got a good lot of tools, too; I saw 'em the day they moved in. An' I heard some of our women-folks that has been to the house say that she has a decent lot of furniture, too, an' that she has her ole granddad an' gran'mam an' the rest of 'em fixed up as comfortably as can be!"

But Joey Madison was not listening to this last bit of gossip. He was keenly watching the approach of the girl on the stalk-cutter. "Say, hoys," he exclaimed, "she's goin' to pass right along the hedge here this time! We'll get to look at her! We'll get to see what she's like!"

Then all three stopped talking and looked. The girl was coming along the low hedge that ran near where they were. As she approached their one wheel of her stalk-cutter jolted disagreeably over a post lying upon the ground. Then it jolted over another and another. With this she stopped the horses and got off. There were a dozen or more posts lying about in the dirt. They had evidently been cut from the hedge near by a long time ago, and the former owner, "ole Frazier," had been too shiftless to pick them up. But the new

owner, Mollie Gordon, now immediately began picking them up and putting them into a neat pile. The boys watched her toss them about with interest. They were Osage-orange posts, not very big, but not very small, either. Any woman by exerting herself a little could have dragged them about. But this young woman lifted and tossed them with such perfect ease!

Joey Madison's eyes bulged. "By jing, boys," he ejaculated, "just look at her lift those posts! See her take that big one! Just see her uow! Now, I call that splendid, really splendid!" he cried, getting enthusiastic all of a sudden.

"She's not a big girl, either," he continued. "Only medium-sized. Hasn't she got the strength, though! If one of my sisters was to lift such a post she'd have a lame back for two weeks!"

Joey admired strength more than anything else in the world. When he was a little boy the wish of his heart had been to become a big, strong, brawny man. But fate had not been kind to Joey. He was not big, and he was not brawny, and he was not strong, and he never would be. He had given up all hope of it now. But he went on admiring strength in other people with all his heart wherever he saw it.



"MOLLIE GORDON BEGAN PICKING THEM UP AND PUTTING THEM INTO A NEAT PILE"

But the McFarlan boys were finding other things to admire in this "female farmer." "Now, there, I told you she had a nice waist!" said Nick, the younger. "Did you ever see anything so neat and trim?"

"An' that's a jaunty sunbounet she has on!" remarked the other. "Looks like it was done up fresh this mornin'. An' don't she sit straight, though! Ridin' farm machinery don't make her round-shouldered any, does it?"

"But I wish we could see her face! I wish we could see her face!" exclaimed Joey Madison, moving uneasily on the seat of his stalk-cutter. "These confounded sunbonnets! You can never see a girl's face while she has one on! I never liked 'em!"

The girl was already driving away again on her noisy stalk-cutter.

"She's bound not to lose any time, anyway," remarked Joey. "Just see her make those grays step up! It takes a woman to abuse a horse every time!"

"You bet," came from both the McFarlan boys.

Just then another man appeared on the scene. His name was Jed Barker. He was middle-aged, and tall, and lank, and very homely. He was breathless just now from walking fast, and he carried in his hands two pairs of newly pointed plow-shovels. This showed he was on his way home from the blacksmith-shop.

"I say, there, you fellows," he shouted, as he came near, "you young fellows that's lookin' for women! I can tell you where to go! I can show you where you can get a good woman!" and he jerked his thumb over

his shoulder toward the girl on the stalk-cutter. "Gals ain't what they used to be, but I've an idy this un'll do. If any of you three are after a woman, now—"

"Yes, but we don't want that kind," said Joey. "We haven't got any use for female farmers. If the women to my house went tearin' over the farm like that I'd tie them up—I would!"

"Tut, boy, you don't know what you're talkin' about!" said Barker, who was remarkable for two things—his great common sense and his great homlieness—"this gal's got two or three old people to support, and one or two little orphan cousins. Collected all the poor relations she had, it looks like—the odds and ends of a family, I call 'em! There's six of 'em, counting the girl herself, but there ain't any man among 'em except the ole granddad, an' he can't work. What would you have her do? How's she to help it?"

"Hire a man," said Joey.

"Bosh! That shows what you know about it!" snorted Barker. "You can't keep a family of six on fifty acres an' hire your work done! Not in this part of the country, anyway. No, she's all right, hoys. There's no gettin' 'round it. Gals ain't what they used to be, but I've an idy this un's worth about seventeen of the common run. She's got all her fences fixed up hog-tight already. You won't have to quarrel with her every year about had fences like you did with ole Frazier. Say, you fellows!" he continued, leaning over the fence toward the McFarlan boys, "you that's rannin' all over the country on Sundays in your huggies after the girls, you can just stop right here next time, if you want a good one!" And Barker jerked his head toward the girl in the stalk-field.

Then he drove on briskly. Joey believed in being very economical of time in the field, and never stopped to gossip across the fences when he could possibly resist the temptation. Also he often gave the McFarlan boys great talks upon what was lost by not "pushin'" things on the farm. However, it was not because of poverty that Joey was so economical. He was counted rich—very rich, he and his mother owning between them nearly a section of choicest land. Three eighths of this belonged entirely to Joey, it having been left him by a granduncle. Also it might be remarked that Joey, when he found himself owner of a lot of good land, did not lease it and go to town to live. Neither did he go to the house, seat himself in the most comfortable chair in the sitting-room, and conclude that he now could make just as much money by good managing as by hard work. Instead of this he labored right on as hard as ever. He had to lease part of the land, of course; then he hired two men, sometimes three, and worked away as hard as any one of them himself, unless it was in the hot harvest-time, when his health sometimes gave out.

To-day, however, for all his energy and for all his interest in his work, there is no denying that Joey's attention to his business was much demoralized. He could not help turning around constantly to look at the girl on the stalk-cutter.

"Wonder what kind of a one she is, anyway!" he would say to himself. "I'd like to talk to her once. I would like to know her!"

He had expressed himself very strongly, it is true, against women who worked in the field. But this was mostly talk with Joey. He had never given any particular attention to the subject, and had no genuine feeling either for or against it. His conversation with the McFarlan boys and with Jed Barker was, for the most part, heedless chatter—chatter which destined afterward to bring him a moment of sorry embarrassment.

"She did lift those posts nice and easy," he thought. "I never saw a girl do anything as fine as that. And there's nothing big or awkward about her, either; not in the least."

He looked over in the direction of the sunbonnet again. She was just approaching the hedge that divided his field from hers. "Now, if I was any account," thought Joey, "if I was worth anything at all, I'd get acquainted with her somehow. I'd strike up a conversation with her over something or other, and her right across the hedge from me!"

"I'll manage it somehow," he concluded, as the forenoon wore on. "Her stalk-cutter'll get out of order or something, and I'll run over and fix it for her." And he watched for this for hours. But the girl's stalk-cutter did not get out of order; it was too simple a machine. And Joey, though he never was at all bashful about approaching girls, could find no excuse for talking to this "female farmer," no way of getting acquainted with her across the hedge.

"I would like to see into that sunbonnet once," he sighed many times throughout the afternoon. "Of course, her waist and shoulders are pretty, as the McFarlan boy said, but you can't really tell anything about her till you see into the sunbonnet. Now, if she'd just get into a snarl with her horses or something I'd go over and help her out. Yes, if she'd just get into a snarl with her horses!"

The girl's team was a pair of splendid young grays, quite capable of "getting into a snarl," Joey thought. They might jump outside the tugs, or kick over the tongue or something like that, it would seem. But this capable young woman got into no snarl with her horses. Joey watched in vain. Then quitting-time came, and he had to unhitch and go home.

However, the next day something happened. The girl did not get into a snarl with her horses, but Joey got into a snarl with his—got run away with, in fact—and the girl came to rescue him.

Joey was always careless about horses. Then his team was a bad one. The black mare would do, perhaps, but the old bay with her was a villain. He had run away countless times in his life, and had taught many other horses the same trick. It was near the end of the afternoon, and Joey's stalk-cutter had become clogged from passing through a pond hole. He stopped the horses, and was about to jump off to clean it out when he found that his body was entangled in the lues. Just at this moment a great round tumbling weed, blown by the wind, rolled in front of the hay. The bay no doubt had seen many tumbling weeds in his long life of hardship on the farm, but he had never seen this one. He jumped to one side, leaping forward, and away he went, taking the black mare with him. At the first jerk Joey had fallen off behind, still entangled in the lines. He dragged and bounded along behind in a terrible way. Fortunately the ground was very soft. Almost the first thing, too, his coat was somehow dragged up around his head. This blinded and confused him horribly, but it was a great protection, as it kept his face from being stabbed and scratched by the corn-stalks.

But the horses did not run far. They were near the corner of the field when they started, and soon came to a hoard fence. The bay attempted to go over this, as he had done on other occasions. And he did go over it, or through it, but the black mare did not. She

fell down in the attempt, also the stalk-cutter got caught on a post. The bay stood still, panting and trembling. They had run only a few rods.

Joey, half smothered, struggled desperately to get out of the lines, to drag down his coat. He was still struggling when a frightened voice near him called out:

"Are you hurt? Oh, are you hurt?"

In another moment an arm was placed under his head, he was raised up, the lines were disentangled and his coat was dragged down. Joey looked up. A sunbonnet with a girl's face inside was bending over him. He was exhausted and bewildered, but not much hurt, so far as he knew. He could have gotten up just then, but the position she had given him on her arm was so comfortable that he closed his eyes and rested a moment. The girl brushed some clay from his forehead and out of his hair with her strong right hand. Then she straightened his clothing, and felt of his hands and wrists as if to see if they were broken.

"Are you hurt?" she asked again, softly. "Are you hurt?"

Joey started up. "No, not at all! Not at all! The horses! The horses!" he said.

"They're all right! They're stuck fast," said the girl. "They can't move. Don't worry! Aren't you hurt some place? You got such an awful dragging!"

"They are stuck fast, aren't they?" said Joey, meaning the horses. "No, I'm not hurt, not at all, I think. It was good of you to come over to help me. I'll not forget it!" he said, gratefully. Then he looked keenly into the sunbonnet.

He was round at the horses' heads now, trying to get them out of their predicament, but for all the exciting surroundings he noticed one thing—the face in the sunbonnet was blonde and had an unusually fresh healthy color. Even the eyes were healthy-looking, being very clear and dewy.

He kicked the black mare up, then extricated the stalk-cutter, and both together he and the girl backed the horses and machine out of and away from the fence.

"That bay is a vagabond!" panted Joey. "He runs every chance he gets. I'll shoot him some day!"

"But however did you come to be tangled in the lines so?" asked the girl, in solemn wonder. "It was awful! If they'd run far you'd been terribly hurt, or killed perhaps!"

"Don't know how I got the lines round me so," said Joey. "I didn't know they were so till I went to get off."

"Well, it was terribly careless of you," said the girl. "I wouldn't have done such a thing when I was ten years old!"

Joey was amused. The girl looked into his face with such genuine wonder. She seemed to be a very sober, sensible girl, this female farmer, rather disposed to rebuke and reprove. But her expression was very frank and straightforward. Then she had dewy eyes and wild-rose cheeks; so Joey could forgive her some things.

"It was a foolish trick of me," he said, agreeably. "I'll watch out again. My mother and sisters always tell me I'm careless with horses."

"I'm sure you must be," said the girl, with spirit. "You ought never to drive bad horses then. You ought to keep to steady old plugs that you know won't run, if you must be careless."

Again Joey was amused at her young severity. "Ah, how hard you are on a fellow!" he said. And he looked appealingly into the sunbonnet.

The girl seemed to suspect he was getting frivolous. She tied her sunbonnet afresh, and turned to go. "I must get back to my stalk-cutting," she said.

Joey tried to detain her. He thanked her again for coming across to help him, and then told her what his name was.

"Yes, I know your name is Joey Madison," she said. "My Uncle Graham told me all about you. I am Mollie Gordon."

She would not be kept after this, and Joey had to let her go. He could not do more field work that day. There were some straps of the harness to be mended, and there was a broken iron in the stalk-cutter—so much for having let his team run away! But it was near quitting-time, anyway. So he drove home to the barn-yard, mended the harness, found a new iron for the stalk-cutter, then did up the chores. After this he went into the house and told his women-folks about the runaway.

Joey had three sisters and a mother; this made four women in the family, while he was the only man. In a household like this a young fellow is apt to be very important and popular, if he is the least bit worthy—if he is not absolutely mean, in fact. Now, Joey was not mean at all. At home and away from home, too, for that matter, he was always lively and high-spirited, yet always humble and kind. It is needless to say, then, that this young man was doted upon by his family of women. To witness, the fact that they still called him by the name of "Joey" long after he had reached man's estate. When they heard about the runaway they screamed and exclaimed and cried over him and begged him not to do it again. Joey reassured them, and promised everything in the way of being careful next time.

(To be continued.)

NEW-YEAR

I saw on the hills of the morning
The form of the New-year arise;
He stood like a statue adorning
The world with a background of skies;
There were courage and grace in his beautiful face,
And hope in his glorious eyes.

"I come from Time's boundless forever,"
He said, with a voice like a song.
"I come as a friend to endeavor,
I come as a foe to all wrong;
To the sad and afraid I bring promise of aid,
And the weak I will gird and make strong."

"I bring you more blessings than terrors,
I bring you more sunlight than gloom,
I tear out your page of old errors,
And hide them away in Time's tomb.
I reach you clean hands, and lead on to the lands
Where the lilies of peace are in bloom."
—Ella Wheeler Wilcox, in Poems of Pleasure.

A HAPPY NEW-YEAR

By Hattie Whitney



WE were always getting out of wood at Maple Knoll. It was the big fireplace in the sitting-room that ate up all the fuel we could get. I never saw such an insatiable monster. Yet we couldn't make up our minds to close it up and put up a stove instead because of its radiant cheerfulness. How jolly it was, just when the first touch of a winter's twilight stole on, to pile fresh hickory logs on the old andirons and watch the flames dash up the chimney's throat and light the whole room with a mellow crimson flame.

But the wood! Of course, we three women couldn't very well go out and chop and haul it, and our funds did not always warrant hiring large quantities laid in, besides which, the neighboring help we could get was not very dependable on at all times.

Maple Knoll was a lovely place, but didn't bring in much revenue, worked, as we were obliged to have it done, by any Tom, Dick or Harry we could pick up; and the old house was picturesque—but leaky as a sieve. Still, we managed very well about everything else, but for fuel we were obliged to depend on getting a load hauled now and then when some neighbor had the time and inclination to undertake it.

Sometimes, to eke out the logs, Cousin Dora and I would secure the trophy of an old stump from the fields or near-by woods, whose roots had decayed, leaving the upper part to topple over easily and fall a prey to the appetite of the old fireplace. A merry fire it made; but one drawback was that there was usually a colony of ants in some portion of it, which the heat would drive to the top; then we would have to extend a lath bridge from the stump to the hearth for the rescue of the colonists; for we couldn't have enjoyed our fire a bit if we had left the poor insects to perish in the flames, after invading their domain and appropriating their habitation.

I am afraid we were not very much like ants ourselves, but rather of the grasshopper order, for so long as we had as much as a stump or a few sticks added and the weather wasn't very cold we didn't worry much or take the precautions we should. So we got finely caught one time.

December though it was, we had had a streak of regular Indian-summer weather—a mild atmosphere interwoven with a soft smokiness. Our stove-wood had run out, and the neighbors had all been too busy hauling cord-wood to attend to our needs. Our chip-yard was in good condition, however, and we had been levying on it for cooking purposes, using what little wood we had for the fireplace, as we didn't need much, and had gone jogging along in an easy, grasshopper way, as if the pleasant weather was going to last all winter.

We woke up the morning of December 30th to find the world nearly lost in a most beautiful blizzard of whirling snow. Not only was the outer world a white desolation, but there were little drifts all over inside of the house.

"Dora," I shouted, bouncing out of bed and landing with one foot in a snow-bank, "how many chips did we bring in last night?"

"About enough to cook breakfast with," Dora answered, with the calmness of despair, as she shook a little puff of snow out of her shoe. I hopped out of my drift and rushed to the window.

"In flakes of a feathery white
'Tis falling so gently and slow,"

I chanted, which wasn't strictly true, for it was falling very wildly and fast.

Dora hurled a pillow at me.

"You won't feel so giddy and musical," quoth she, "when you learn there are only four sticks of wood for the fireplace. I suppose you perceive it's about forty degrees colder than it was yesterday; and you know not a man in ten miles of here'll come out now to haul any more."

I couldn't meet her argument.

"Well," I said, hustling to get my shoes on and buttoned before my fingers froze, "I know a stump whereon the wild thyme grows—or toadstools. We'll get that. Maybe the anties will all be comfortably frozen so they won't

harrow us by running out and scorching themselves. Meantime let's go down and make a fire and get a good warm-up if we do perish afterward."

"We'd better save the sitting-room wood until after breakfast," counseled Dora, "and just have a fire in the cook-stove till then, and eat in the kitchen."

"Sure," said I, "that'll be a lark."

In spite of the dismal outlook we had a cheerful fire and a cozy kitchen when Aunt Laura came down, and then while she began to prepare breakfast Dora and I did ourselves up like Laplanders and plunged out into the blizzard to feed and milk the cows, after which we braved the winter's blast long enough to transport my treasure stump to the house, which we did partly by lugging and partly by rolling it over and over.

Breakfast was ready when we got it safely under cover, and notwithstanding our impending doom, we fell upon the ham and fried potatoes and pancakes, and enjoyed our meal immensely.

"Girls," said auntie, when the last potato and the last crimped brown batter-cake had vanished, "I don't want to dampen your spirits, but there isn't a chip left, and how we're going to cook dinner I don't see."

"Might split up the bureau," I suggested, "it's so awfully old I think it's one Mrs. Noah's grandmother left her, and she prized it so highly she took it along—"

"Nutt," said Dora (who was just three months older than I), "don't talk so much. Little girls should be seen and not heard. I've got a scheme. We'll cook dinner by the fireplace."

"Dora," I said, "you're gifted. That's what we will, and imagine we're our own great-grandmothers and great-aunts—how lovely!"

"Well, you'll have to help, miss, and I don't if you think it so lovely before you get through," returned Dora. "You'll be baked a beautiful brown; but

"Yours not to make reply,
Yours not to question why,
Yours but to bake and fry,

"and that's our only chance of having any dinner."

We took an inventory of our stores to see what there was we could cook by the fireplace.

"There's a sparerib, for one thing," announced Dora. "We'll hang it up by a string in front of the fire."

"Potatoes we can boil by hanging the kettle on the hook and chain," said Aunt Laura.

"And the sweet potatoes we can roast in the ashes," I added.

"And bake corn in a skillet in the hot coals," finished Dora.

"Goody," said I, "that's fine enough dinner for a blizzard day like this. Of course, nobody'll come."

But somebody did come, as they usually do when you think they won't; and who, of all persons, but the Reverend Cyrus Melton! Dora fairly squirmed when Aunt Laura brought him right into the sitting-room, for, of course, she couldn't take him anywhere else, unless she wanted to freeze him. So in he came, smiling placidly, and there was the rib cooking in front of the fire with a skillet set under to catch the gravy, and there was Dora with her face like a hollyhock, turning a great hoe-cake in another skillet, and there was I prodding in the ashes with a long fork to dig out the sweet potatoes! Not that it mattered much about me; but some folks were beginning to observe that the Reverend Cyrus was a trifle more attentive to Dora than the fact of her being one of his flock warranted, and I knew that in her eyes he was about as near a state of perfection as a mortal man needed to be.

He was just riding out, he explained, to see old Mrs. Hankins, who was sick, and had been delayed a little by the blizzard and been on the road quite awhile; he had brought a bag of oats for his horse, and had come up through the side lane and taken the liberty to put the animal in our barn to eat his oats, while he himself ran in to see how we all fared this inclement day, etc., etc. I slid out while he was thus discoursing, and rushed to the parlor with a very forlorn hope of finding a stray stick or two left over there, making a fire and getting him into the parlor while we finished the dinner. The hope died as I poked my head into the arctic desolation of our best room. It was on the east side, where the spiteful wind had been battering at it all night, searching out a hundred crevices about windows and door to hurl the fine, powdery snow through. There were drifts, varying in size, on the sofa, on the piano, on the chairs, and a dainty white powdering all over the carpet, which the wind had puffed in under the door. You could fairly feel the gale whisking about your ears. There wasn't a scrap of wood nor a chip in the wood-box. Relinquishing a wild idea of chopping up a parlor chair or two to make a fire of I scooted back to the sitting-room chilled to the bone. Dora, putting as bold a face upon the situation as possible, was bringing in dishes from the dining-room and setting the table right under the eyes of the minister, who was chatting away as serenely as if he hadn't driven us all frantic by his ill-timed call. Aunt Laura had levied on her cellar goodies and produced preserved quinces, apple jelly,

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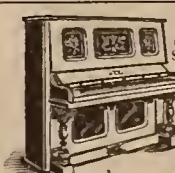


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pickled peaches and chow-chow, so the dinner wasn't so frightful. The only thing I was ashamed of was the corn-cakes; they were so big and clumsy, and Dora had crumbled the edges in turning them. But that good man seemed to think we had a banquet, and even the corn-cakes didn't go begging so far as he was concerned.

We all made merry over our predicament as we told him how it happened, and he joked about it, too, but shook his head a little, and said it oughtn't to go on that way. He proceeded upon his errand soon after dinner, and we went about our work with what spirits we might. It wasn't more than two hours after he left that Uncle Jink, a dilapidated old colored man, appeared with a yoke of steers, which he left in the lane while he came plodding through the snow to the house. "Heard y'all was out o' wood," he grinned, "so I 'lowed I'd come an' snake up a few logs 'n' split fer de fireplace, 'n' whack up some fer de cook'n'-stove."

"It's very kind of you, indeed," said Aunt Laura, "for we are in great need of wood—only I'm afraid I can't pay you for it to-day, Uncle—"

"Dass all right—dass all right," interrupted Uncle Jink. "don't y'all hoddah 'bout dat—dass all right," and he scuffed away, leaving us a little mystified, for it was not quite like Uncle Jink to be so indifferent about compensation for his good deeds.

"Of course Mr. Melton went and told him to come, and either paid him or agreed to if we didn't," expounded Dora, and looked as if she was ready to fall in a heap.

"It was very good of him if he did," said Aunt Laura.

"Good—yes; but who wants to be an object of charity," groaned Dora, "especially—"

"Oh, well, I don't suppose he'll preach about it next Sunday," I said, consolingly; but Dora wouldn't cheer up very much. Still, it was very comfortable to have plenty of wood, and I felt grateful to the good man for instigating Uncle Jink to come to our assistance.

Of all the three hundred and sixty-five days of that year the three hundred and sixty-fifth was the most dismal at Maple Knoll. It opened with a drizzling, soaking rain, much more depressing than the blizzard from which it evolved; the kind that dampens your spirits in spite of all the philosophy you can bring to bear against it. The sky was a dismal gray waste without a slit of light. Aunt Laura had a racking neuralgia in her face. Dora had been dreaming about charity and wood all night. As for me, I had a little trouble of my own which popped up just now more aggressively than ever. I never had but one lover (I never wanted one), and he was a poor young man, who had gone to the frozen Alaskan regions with the avowed intention of making his fortune and coming back to share it with me, rebuild the old house into a stately mansion, and take care of Aunt Laura and Dora, which was quite proper; for, you see, I had been gathered into the family when I was left a small orphan, in Uncle John's time, and he and Aunt Laura had made not an atom of difference between Dora and me, in their love and care. But now it had been so long since I had heard from Frank I couldn't help being afraid he had frozen to death or been buried in a snow-slide. And this dreadful rainy day I couldn't even have the satisfaction of going or sending to town for the mail, if there should possibly be any news.

Dora and I had an unwritten law that the more downcast we felt the jollier we should force ourselves to be. To-day I think we degenerated into silliness in our efforts to be cheerful. But a lot of smaller troubles followed each other so persistently—such as the refusal of the cook-stove to draw, the falling of the light bread in consequence, a slip in the mud on Dora's part, etc., etc.—that when, to cap the climax that evening, our beloved fireplace smoked sulkily and relentlessly, we felt that we might as well wind up the year by going to bed at eight o'clock.

When we were all snuggled down and the lights were out I could have cried just out of low spirits, but I wouldn't. I knew God could see farther ahead than we could, and I put everything into his hands and went to sleep.

I slept so soundly that I was greeted the next morning by a savory, sagey scent of frying sausages coming up the little back stairs before I fairly got back from the slumber world. Dora was down in the kitchen singing "Lightly Row" over the biscuits, and looking as fresh as a peach, with her rosy cheeks and clear gray eyes. And the stove was drawing beautifully. And Aunt Laura came down without a speck of neuralgia, and feeling spry as a girl, to finish breakfast, while Dora and I went forth to do the milking. And behold, the sopping rain had turned into a lovely, soft snow in the night; not a blizzard snow like the one before the rain, that blew in everywhere, but a gentle, fine, thick powder. It had stopped falling now, and the air felt crispy and bracing. The sun wasn't shining yet, but there was a mellow look in the sky, as if it meant to pop out any minute.

New-Year's calling was not much in vogue in our rural district; still, it was Aunt Laura's way to make a red-letter day of the opening one of the year, and always to be prepared for any stray caller who might chance to appear. So we had a cheerful fire in the parlor,

a plentiful supply of coffee and cake on hand, and we all put on our pretty house dresses and prepared to be happy whether any one came or not.

At half-past nine a pleasant melody of sleigh-bells jingled along, and the cutest little cutter stopped at our gate, and here came the Reverend Cyrus Melton smiling up the walk. We were mighty thankful for the contrast between this call and his last one; but such is the perversity of man. I imagined he looked a little disappointed at not being ushered into the cooking regions again. Still, he smiled very good-naturedly, with those jolly brown eyes of his, as he fished something out of his pocket and handed me.

"Miss Nettle," he said, "I felt it in my bones that you couldn't get any mail up here on the hill all yesterday, and I dropped in at the post-office as I came by this morning, and found you this."

Maybe I didn't know what it was, even before I saw the handwriting on it, and perhaps I didn't fly to get it and scamper out to the big fireplace and curl down beside it on a little wooden stool to read my letter all alone. Frank hadn't made a fortune, he wrote me, and he didn't know as we could have a big mansion built, but he had dug out enough gold to repair the old house and make us all comfortable, and he was on his way home that blessed minute to metamorphose Maple Knoll into the finest little farm in the county, take care of aunt and Dora and (incidentally) marry me.

When I got back to earth again Mr. Melton had taken Dora off in his sleigh for a ride, so auntie and I had a little jollification of our own, and forgot all about lunch-time. It didn't matter, though, for when the sleighing couple came back they didn't seem to know much of anything. I fell on Dora in the hall and told all about Frank's letter, and she hugged me black in the face and said she was tremendously pleased, but he wouldn't have to take care of her, because that was going to be attended to by the Reverend Cyrus, who was the dearest man in the world, but crazy as a loon, because he confessed that he had fallen more in love with her than ever the day he came and found her baking hoe-cakes in the fireplace.

We celebrated that night by having the highest fire of the season in the old fireplace, which behaved splendidly, and we sat up till all kinds of hours, Aunt Laura, Dora and I, with no light but the mellow crimson and gold brilliance that shone out of that big old black cavern, roasting nuts and red apples, talking about the new paths opening before us, and telling each other how grateful and thankful we ought to be for this happy opening day of the new year.

2

DIAMOND SAWS FOR STONE

The use of the diamond saw for cutting stone is facilitating the erection of the buildings for the exposition of 1900 at Paris. This new circular saw is due to Felix Fromholt, a Parisian engineer. The diamonds which form the cutting teeth of the saw are common crystals, worth about ten shillings a carat, and they are fixed in a steel disk over six feet in diameter, which is mounted on a spindle, and revolved by steam-power like an ordinary circular saw. For sawing hard stones there are two hundred diamonds in the cutting edge, and the speed is three hundred turns a minute. It advances into the stone about a foot in that time. For soft stones the teeth are of steel, with diamonds at intervals of every five teeth, and at a speed of twelve turns a minute the saw advances about a yard in that time.

The new saw has been at work in the workshops of the Champs Elysees for several months, and has given every satisfaction. It cuts and dresses the stone on all sides and gives it sharp outlines. Moreover, it does so at one eighth to one tenth the cost of hand labor. A saw of this kind with an alternative movement, sawing stones four to six feet high, is to be set up. Evidently this new implement has a future before it, and may be recommended to the attention of stone-cutters in this country, especially the granite-workers of Scotland.—*Loudon Globe.*

2

NO YARDS TO MAN

"Manning the yards" will soon be an obsolete naval term. For one thing, there are very few ships now in service with yards to "man," but there was no prettier sight than this on a ship of war. At a given signal the men are seen running up the rigging at what appears a breakneck pace, some of the sailors remain on the lower yards, while others ascend higher and higher, till the topmost yard is reached. Again, another signal is given and the men ease outward with extended hands until every yard appears hung with festoons of sailors.

The modern method is known as "manning the bulwarks," in which the men stand facing the water all round the bulwarks. The contrast between this and the former method is great, but there is little doubt that by degrees the custom of "manning the yards," which has been in vogue for over three hundred years, will finally die out and cease to be in the code of honors.

All That's Needed

No soap, no soda, no borax, no ammonia—nothing but water is needed to make things white and bright and beautifully clean with

GOLD DUST

Washing Powder

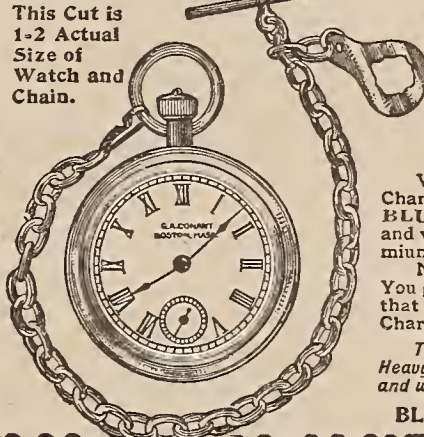
It cleans everything quickly, cheaply, thoroughly. Sold everywhere. Largest package—greatest economy.

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SEND NO MONEY WITH YOUR ORDER, cnt this Ad. out and send to us, and we will send you **OUR HIGH-GRADE BURDICK SEWING MACHINE** by freight C. O. D., subject to examination. You can examine it at your nearest freight depot and if found perfectly satisfactory, exactly as represented, equal to machines others sell as high as \$50.00, and **THE GREATEST BARGAIN YOU EVER HEARD OF**, pay your freight agent **Our Special Offer Price \$15.50** and freight charges. The machine weighs 120 pounds and the freight will average 75 cents for each 500 miles. **GIVE IT THREE MONTHS TRIAL** in your own home, and we will return you \$15.50 any day you are not satisfied. We sell different makes and grades of Sewing Machines at \$8.50, \$10.00, \$11.00, \$12.00 and up, all of which are fully described in our Free Sewing Machine Catalogue, but **\$15.50** for this **7-DRAWER BURDICK** is the greatest value ever offered by any house. **THE BURDICK** has every modern improvement, every good point of every high-grade machine made, with the defects of none. Made by the best maker in America. **SOLID OAK CABINET, BENT COVER.** Latest 1899 Skeleton frame, piano polish, finest nickel drawer pulls, rests on 4 casters, ball bearing adjustable treadle, genuine Smyth iron stand, finest large high arm head made, positive four-motion feed, self threading vibrating shuttle, automatic bobbin winder, adjustable bearings, patent tension liberator, improved loose wheel, adjustable presser foot, improved shuttle carrier, patent needle bar, patent dress guard. **GUARANTEED** the lightest running, most durable and nearest noiseless machine made. Every known attachment is furnished and our Free Instruction Book tells just how anyone can run it and do either plain or any kind of fancy work. **A 20-YEAR GUARANTEE** is sent with every machine. **IT COSTS YOU NOTHING** to see and examine this machine, compare it with those your storekeeper sells at \$40.00 to \$50.00, and then if convinced you are saving \$20.00 to \$35.00, pay your freight agent the \$15.50, **WE TO RETURN YOUR \$15.50** if at any time within three months you say you are not satisfied. **ORDER TO-DAY. DON'T DELAY.** (Sears, Roebuck & Co. are thoroughly reliable.—Editor.) **WRITE FOR FREE CATALOGUE.** **SEARS, ROEBUCK & CO., CHICAGO, ILL.**

This Cut is
1-2 Actual
Size of
Watch and
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Watch and Chain FOR ONE DAY'S WORK.

We send this Nickel-Plated Watch, also a Chain and Charm to Boys and Girls for selling 1½ dozen packages of **BLUINE** at 10c. each. Send your full address by return mail and we will forward the Blaine, postpaid, and a large Premium List.

No money required. We send the Blaine at our own risk. You go among your neighbors and sell it. Send us the money that you get for it and we send you the Watch, Chain and Charm, prepaid.

This is an American Watch, Nickel-Plated Case, Open Face, Heavy Bevelled Crystal. It is Guaranteed to keep Accurate Time, and with proper care should last Ten Years.

BLUINE CO., 392 CONCORD JUNCTION, MASS.



Whooping Cough, Croup, Asthma, Colds

Hundreds of thousands of mothers use Vapo-Cresolene. Do You? Cresolene cures Whooping Cough every time; stops Croup almost immediately, and if used at once will cure a Cold before any complications can arise. I. N. Love, M.D., of St. Louis, says: "I have instructed every family under my direction to secure it." Mrs. Ballington Booth, says: "I recommend that no family where there are young children should be without it." W. E. Chichester, M.D., of New York, says: "As a vehicle for disinfecting purposes Cresolene is immediately successful." Anthony Comstock, says: "Malignant Diphtheria in my house; Cresolene used; cases recovered in two weeks; no others were affected." Descriptive booklet with testimonials free. Sold by all druggists.

VAPOR-CRESOLENE CO., 68 Wall St., New York.
Schieffelin & Co., New York, U. S. Agents.

LARKIN SOAPS

Our offer fully explained in Farm and Fireside November 1st and 15th.

SEND US ONE DOLLAR and this ad., and we will send you this big 325-lb. new 1899 pattern high grade **RESERVOIR COAL AND WOOD COOK STOVE** by freight C. O. D., subject to examination. Examine it at your freight depot, and if found perfectly satisfactory, factory and the greatest stove bargain you ever saw or heard of, pay the freight agent our **SPECIAL PRICE, \$13.00**, less the \$1.00 sent with order, or \$12.00 and freight charges. This stove is size No. 8; oven is 16x13x11; top is 42 by 23; made from best pig iron, extra large flues, heavy covers, heavy linings and grates, large oven shelf, heavy tin-lined oven door, handsome nickel-plated ornamental and trimmings, extra large deep genuine standish porcelain-lined reservoir, handsome large ornamented base. Best coal burner made, and we furnish **FREE** an extra wood grate, making it a perfect wood burner. **WE ISSUE A BINDING GUARANTEE** with every stove, and guarantee safe delivery to your railroad station. Your local dealer would charge you \$25.00 for such a stove; the freight is only about \$1.00 for each 500 miles, so we save you at least \$10. Address **SEARS, ROEBUCK & CO. (Inc.), CHICAGO, ILL.**



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Every home should have our New Improved Thermal Vapor Bath Cabinet (patented). It gives a hot vapor bath which forces all impurities from the system by natural action of the pores of the skin. Immediate relief guaranteed in worst forms of Rheumatism, Neuralgia, La Grippe, Croup, Influenza, all Blood, Skin, Nerve and Kidney Diseases; reduces Surplus Flesh. One bath cures the worst cold. Unequaled for general bathing purposes. Folds up when not in use. Price \$5.00. Ladies should have our Complexion Steamer, used in conjunction with Cabinet, price \$1.50 extra. Invaluable for the successful treatment of Asthma and Catarrh. Clears the skin, removes Pimples, Blemishes, Blotches and Salt Rheum; gives a soft, velvety complexion. Descriptive circular and testimonials to all who write. **SPECIAL INDUCEMENTS TO AGENTS.** **MOLLENKOPP & MCCREERY, 191 Summit St., Toledo, Ohio.**



PRICE \$5.00

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(One is my mother, God bless her, I love her, the other is my sweetheart.) This is a song, and no prettier one was ever written. To introduce same a sample copy will be sent for eight 2-cent stamps.

GROENE MUSIC PUB. CO., 32 E. 5th St., Cincinnati, Ohio.

CANVASSERS COIN CASH

In working for me. Ladies and gentlemen, this is your great opportunity. **OUT-FIT FREE.** Are you ready? Workers write at once to **E. HANNAFORD Sp. Field, Ohio.**



THE USELESS

He was never known to fret
For things he couldn't get.

He went at an easy pace:

He never complained about his lot,
He lived for fifty years and not

A line showed in his face.

He didn't need to slave

And he never was known to crave

A place among the high;

He held that he owed the world no debt,
He lived on competence and let

The years go drifting by.

They took him up one day,

And laid his form away,

And no one shed a tear;

Go seek his trail, go search around,

You will find but a little yellow mound

To show that he was here.

—Cleveland Leader

HER BREAKFAST

THIS little girl was not an imaginary child, supposed to live at Boston, but she was a real tot from Chicago, and she was traveling East with her parents. She had partaken of breakfast in the dining-car and had returned to the parlor-coach, when a gentleman asked, in a friendly tone:

"What is your name, little girl?"

"Mildred, sir."

"That's a very pretty name."

"Yeth, sir."

"Where do you live, Mildred?"

"In Chicago, sir."

"How old are you?"

"Five, sir, going on thirteenth."

"You have had breakfast, I suppose?"

"Yeth, sir."

"Good breakfast?"

"Yeth, sir."

"You had breakfast, I suppose?"

"No, sir."

"Potatoes?"

"No, sir."

"Eggs, with a little breakfast bacon, perhaps?"

"No, sir."

"Perhaps you had toast and butter, with a glass of milk?"

"No, sir."

"Then you must have had boiled fish, with bread and butter?"

"No, sir."

"Well, you had some fruit, then?"

"No, sir."

"Well, Mildred," said the gentleman, with a puzzled expression, "I have guessed about everything I can think of. Perhaps you will tell me what you had for breakfast?"

"Yeth, sir," replied the little maiden. "My diet consisteth mostly of therealth."—Detroit Free Press.

SAID ABSOLUTELY NOTHING

There are many stories of children speaking articulately at an early age, but the following which we translate from a French journal would seem to indicate that the power of comprehension and speech may, under certain circumstances, be developed in a child and be unused and its presence unsuspected. A child of wealthy parents, a baby girl of between nine and ten months of age, was attacked by malignant diphtheria. A consultation of physicians was held, and the most eminent specialist in Paris, having examined the little sufferer carefully, turned to the father, and said, "M. X., I am grieved to tell you that this is a case where science can do absolutely nothing." He repeated the words "absolutely nothing" with conviction, and the child, too, opened its eyes and, looking at its father, said—absolutely nothing!

The story is thoroughly well authenticated. Fortunately the child recovered and learned to talk in the usual way and at the usual time. All those present agree that the sick child at the time referred to, being then under ten months of age, said absolutely nothing.—Hartford Courant.

NOT A GOOD THING

A young husband, finding that his pretty but rather extravagant wife's expenditures were considerably exceeding their income, brought her home one day a neat little account-book. This he presented to her, together with thirty dollars. "Now, my dear," he said, "I want you to put down what I give you on this side, and on the other write down the way it goes, and in a fortnight I will give you another supply." A couple of weeks later he asked for the book. "Oh, I have kept the account all right. See, here it is," said his wife. On one page was subscribed, "Received from Will thirty dollars," and on the one opposite the comprehensive little summary, "Spent it all."—Forward.

NO MORE QUESTIONS

The nature of a presiding officer's duties varies with time and place. An athletic miner was in the chair at a political meeting in New South Wales just before a close and exciting election. One of the candidates was present to speak.

During his address he was interrupted by hooting and rough chaff, and the chairman was soon in a state of boiling indignation. Smothering his wrath, however, he pacified the "boys" by assuring them that at the end of the candidate's speech they should be at liberty to put any questions they chose. Accordingly, at the end of the harangue he rose and inquired, in stentorian tones and in a rich Irish brogue:

"Has innny gentleman a question to airsk?"

A stout little Welsh miner, who had been a conspicuous disturber of the peace of the evening, shuffled slowly up the steps of the platform. But at the top he was met by the chairman, who, without the slightest warning, delivered a terrific left-and-right, and sent the Welshman sprawling on his back.

"Now," roared the chairman, "has innny other gentleman a question to airsk?"—and there was no response.—Yonth's Companion.

THE COLORED SENTINEL

Washington, hearing that the colored sentinels could not be trusted, went out one night to ascertain if the report was correct. The countersign was "Cambridge;" and the general, disguised, as he thought, by a large overcoat, approached a colored sentry.

"Who goes there?" cried the sentinel.

"A friend," replied Washington.

"Friend, advance, unarmed, and give the countersign," said the colored man.

Washington came up, and said, "Roxbury."

"No, sah!" was the response.

"Medford," said Washington.

"No, sah!" returned the colored soldier.

"Charleston," said Washington.

The colored man immediately exclaimed, "I tell you, Massa Washington, no man go by here 'out he say 'Cambridge.'—Yonth's Companion.

A COMMON DISEASE

There came to a young doctor an uncommonly unclean infant borne in the arms of a mother whose face showed the same abhorrence of soap. Looking down upon the child for a moment, the doctor solemnly said:

"It seems to be suffering from 'hydrophatic hydrophobia.'"

"Oh, doctor, is it as bad as that?" cried the mother. "That's a big sickness for such a mite. Whatever shall I do for the child?"

"Wash its face, madam," replied the doctor; "the disease will go off with the dirt."

"Wash its face—wash its face, indeed!" exclaimed the mother, losing her temper.

"What next, I'd like to know!"

"Wash your own, madam—wash your own," was the rejoinder.

THE CAT AND THE FIDDLE

The following is the work of a Leavenworth school-girl in an effort to render into classical Bostonese the familiar "Cat and the Fiddle."

"A corporeal being endowed with sensation and motion performed on a lyre, from which issued the most harmonious strains of melody; another corporeal being, whose Latin name is taurns, skipped airily over a celestial body; a quadruped was provoked into jocularly by the unusual spectacle, and a solid ellipse sped with celerity to a far distant land of happiness with an argant instrument for sipping liquids."

CONUNDRUMS

How does a tipsy man generally look? Dizzy-pated.

What is the difference between a winter storm and a child with a cold? In the one it snows, it blows; the other it hnows its nose.

What is better than an indifferent singer in a drawing-room? A different one.

Why are bookkeepers like hens? Because they have to scratch for a living.

EXPLAINED AT LAST

Suitor—"Your daughter, sir, is the light of my existence."

Her father—"Oh, that's it, eh? I've often wondered how you could ever see her, with the gas turned so low."—Chicago News.

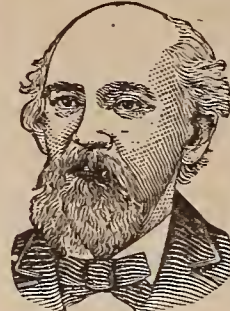
CARRYING IT TO AN EXTREME

"Bixby is the most rabid anti-annexationist I ever met."

"How is that?"

"His wife had 'floating islands' the other night for dessert, and he wouldn't touch 'em."—Cleveland Plain Dealer.

Free—A Wonderful Shrub—Cures Kidney and Bladder Diseases, Rheumatism, etc.



Mr. Calvin G. Bliss.

Disorders of the Kidneys and Bladder cause Bright's Disease, Rheumatism, Gravel, Pain in the Back, Bladder Disorders, difficult or too frequent passing water, Dropsy, etc. For these diseases a Positive Specific Cure is found in a new botanical discovery, the wonderful Kava-Kava Shrub, called by botanists, the piper methy-sticum, from the Ganges River, East India. It has the extraordinary record of 1,200 hospital cures in 30 days. It acts directly on the Kidneys, and cures by draining out of the Blood the poisonous Uric Acid, Lithates, etc., which cause the disease.

Rev. John H. Watson testifies in the *New York World*, that it saved him from the edge of the grave when dying of Kidney disease, and terrible suffering when passing water. Mr. Calvin G. Bliss, North Brookfield, Mass., testifies to his cure of long standing Rheumatism. Mr. Jos. Whitten, of Wolfboro, N. H., at the age of eighty-five, writes of his cure of Dropsy and swelling of the feet, Kidney disorder and Urinary difficulty. Many ladies, including Mrs. C. C. Fowler, Locktown, N. J., and Mrs. Sarah Tharp, Montclair, Ind., also testify to its wonderful curative powers in Kidney and allied disorders peculiar to womanhood.

That you may judge of the value of this

Great Discovery for yourself, we will send

you one Large Case by mail FREE only asking

that when cured yourself you will recommend

it to others. It is a Sure Specific and cannot fail.

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SEND ONE DOLLAR

Cut this ad. out and send to us and we will send you this CORN SHELDER by freight, C. O. D., subject to examination. You can examine it at your freight depot and if found perfectly satisfactory and equal to Shellers that retail at \$10.00 to \$12.00, pay the railroad agent our special offer price, \$5.00, less the \$1.00, or \$4.00, and freight charges. The sheller weighs 135 pounds and the freight charges for 500 miles will be about 75 cents, greater or shorter distances in proportion. THIS IS THE BEST ONE-HOLE CORN SHELDER ON THE MARKET. Very strong, durable and easy to operate. Frame is made of hard wood and shafting of rolled steel, balance wheel is large and heavy, which makes it the easiest running sheller made, has adjustable rag iron, will shell any kind of corn. Comes with fan and feed table complete. Shelling capacity, 25 bushels per hour. ORDER AT ONCE; don't delay. Write for free Agricultural Implement Catalogue. Address, SEARS, ROEBUCK & CO. (INC.) CHICAGO.

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If any reader, suffering from rheumatism, will write to me, I will send them free of cost a trial Package of a simple and harmless remedy which cured me and thousands of others, among them cases of over 40 years standing. This is an honest remedy that you can test before you part with your money. Address JOHN A. SMITH, 761 Summerfield Church Building, Milwaukee, Wis.

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FARMER BOY Can you use tools? Then make money placing HANDY FASTENERS on barn doors. Write for particulars. F. J. BEACOCK, CANTON, IND.

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The kind that grow rapidly and mature early are the ones which "top the market." The making of such birds depends upon the feed, likewise the digestion. Feed Green Cut Bone, the great flesh forming food for growth and Mann's Granite Crystal Grit for the digestion and the problem is solved.

MANN'S NEW BONE CUTTERS "beat all" for making poultry food out of bone. Meat and gristle can't stop or choke them. They cut fast, fine and run easy. 12 sizes. We also make Clover Cutters and Feed Trays. Cash or on installments. Send for FREE illustrated catalogue. F. W. MANN CO., Box 32, Milford, Mass.

SILK REMNANTS FOR CRAZY WORK.

A big package of beautiful Silk Remnants, from 120 to 150 pieces, all carefully trimmed, prepared from a large accumulation of silks especially adapted for a kind of fancy work. We give more than double any other offer, and the remnants are all large sizes, in most beautiful colors and designs. With each assortment is four skeins of the very best embroidery silk, assorted colors. Send 25 cents in silver or stamps to Paris Silk Agency, Box 3045, N. Y. City, N. Y.

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No Laundry Work

When soiled discard.

Ten Collars or five pairs

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REVERSIBLE COLLAR CO., DEPT. C, BOSTON.

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TALKING MACHINE

In public halls,

school houses and

churches. It talks,

sings, it laughs, it

plays music, it imitates

perfectly the brass band,

the orchestra, the piano,

the human voice, in fact

anything. A wonder as a

money maker and as a home entertainer. All

the latest music, either vocal or instrumental, speeches

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terial or talking records, large illustrated advertising

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child can operate it and nothing to get out of order. Will last

a lifetime. Cut this ad. out and send for catalogue of

Graphophones, Records, etc., with copies of hundreds of tes-

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dollars with our exhibition outfits. ADDRESS,

SEARS, ROEBUCK & CO., (Inc.) Chicago, Ill.

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WE WANT MONEY.

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WE SELL DIRECT TO FARMERS AT WHOLESALE PRICE.

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DISEASED HOOF

CORNS QUARTER CRACKS

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paying business. All profits clear, as we

prepay charges. The rush is on, so come

quick. FARM AND FIRESIDE, Springfield, O.

RUBBER

For Men, Women and Children. Address,

The N. C. & Rubber Mfg. Co.,

147 Huron St., TOLEDO, OHIO. Catalogue Free.

PATENT

Secured or money all returned. Search free.

Collamer & Co., 1040 F St., Wash., D. C.

A MEDDLING PHONOGRAPH

The board of health is the recipient of many queer complaints, but the one it received the other day from a disgusted and nervously prostrated jeweler of Eighth street is entitled to prominence in a class by itself.

It seems that the jewelry-store is located next door to a phonograph establishment that has for the purpose of attracting passers-by a phonograph going all day long. All kinds of tunes and alleged witty sayings are squeaked forth from early in the morning until late at night in peculiarly penetrating and nerve-destroying tones. At first the machine efforts at wit amused the jeweler, and he used to laugh heartily at the comicallities, but these were repeated with such deadly persistency that they began to pall, and from being amused the tradesman grew into a negative desperado.

One day the climax was reached when a customer, who looked like "ready money," came in to buy a diamond ring. For some reason the machine next door was quiet for awhile, and the jeweler was just on the point of closing a highly profitable sale when the shrill voice of the phonograph began to sing "Get Your Money's Worth." The amazed customer hesitated, and finally told the jeweler he would call another day. The incident was the last straw, and the board of health will now look into the matter.—Philadelphia Record.

2

THEY WERE FARMER BOYS

There are some people foolish enough to laugh at the homely virtues of farm life. They are unfortunately few, and they are fortunately growing fewer; but it is well sometimes to look at the list of great men who came up from the farm—not all of them, for that would fill volumes, but some of the most notable ones that flash into the mind in a moment.

Nearly three fourths of the men who have been chosen by the people for the great offices of the nation are men who were familiar with wooded hills and cultivated fields. For example, Washington, Lincoln, Grant, Garfield, Hamlin, Greeley, Tilden, Hayes, Blaine, Harrison, and many others almost equally conspicuous. Henry Watter-son spent his early life in rural Kentucky. Murat Halstead was born and lived on a farm in Ohio. Jay Gould spent his early years on his father's farm in New York. Whittier spent his youth in a village, dividing his time between farm employment and his studies. Whitelaw Reid was a boy on an Ohio farm. The reader can add names by the score of successful professional and business men of his own acquaintance whose foundations for business were laid on the farm.

2

COLTON'S ADVICE

The other day, as I was clinging to the strap of a Lexington-avenue car, two ladies sat near me, and as one opened her portemonnaie to pay her fare a scrap of paper pasted to the leather was disclosed.

"Is that your shopping-list?" asked the other. "It doesn't look like a long one."

"No," was the reply; "it is not the list, but it is what keeps the list from being a long one," and she read:

"He who buys what he does not need will soon need what he cannot buy."

"What a capital guardian of your capital! You must let me copy that for my leaky purse. Who wrote it?"

"I don't know, but I wish I did, for he has saved many a dollar from lightly rolling from my hands since I put it here."

I was intently interested in the conversation, for at that very moment there lay in my note-book a scrap which I would have brought forth but for the fact that my corner was reached.—Christian Advocate.

2

A NEW ARTIFICIAL STONE

Papyristite is a new artificial stone, made from purified paper pulp and other ingredients, by Fr. Gehre, a civil engineer of Zurich. It is an improvement on papyrolite, invented by the same man. It is especially intended for jointless roofs or floors, and is a non-conductor of heat, cold or sound. It is hard as a stone, but has a soft, linoleum-like feeling under foot, and is noiseless. It weighs less than stone or cement, and 220 pounds of the preparation in powdered form, spread four tenths inches thick, will cover ninety square feet. The cost is said to be exceedingly low, and it can be laid without special machinery; it is dry in twenty-four hours, and can then be highly polished.—Engineering News.

HAVE YOU WEAK LUNGS?

Every Sufferer from Lung Weakness, Consumption, Catarrh or Bronchitis Can Be Cured

Treatment Free to All Our Readers

Nearly everybody you meet will regard it as a kind of insult to be asked if they have weak lungs. All seem to have a solid faith in the soundness of their own breathing machine. In cases of trouble they will admit there is a "heavy cold," "a touch of bronchitis," or even "a spell of asthma," but as to weak or unsound lungs, never, NEVER. Even the poor consumptive, who scarcely speaks without coughing, whose cheeks are wasted, hollow and bear the hectic flush of doom, will assure you with glistening eyes that his cold is on the mend and he will be all right when the weather changes.

It is simply terrible to think how far we may be guilty by our indifference to the lung troubles of those near and dear to us. It is also a sad thought that we may hug a delusion as to our own health that we only get rid of when life itself must pay the forfeit.

Nobody can afford to think lightly of lung troubles. Nobody can afford to be mistaken about their possible dangers. Nobody can afford to neglect them, or "let them wear out," or "get better in the spring," or any other tomfoolery that leads only to wreck and ruin. Lung troubles don't move backward. Weak lungs don't grow strong by themselves—you must heal them and strengthen them, and rid them of the very earliest germs of disease, or you are simply committing a form of suicide. Either you must cure your lung troubles or THEY WILL KILL YOU. That's the whole situation in a nutshell.

Never was there a cure for lung troubles equal to the newly discovered Dr. Slocum treatment. This forms a system of three remedies that are used simultaneously and supplement each other's cura-

tive action. It cures weak lungs, bronchitis, asthma, coughs, consumption and every other ailment of the pulmonary region. It destroys every germ that can affect the respiratory system, and even in advanced stages of lung trouble positively arrests the tubercular growth, while it also builds up the patient so that his system is enabled to throw off scrofula, rheumatism, catarrh, and other wasting diseases.

Thousands of cured cases already prove these claims. Thousands of grateful people bless the discovery.

The system consists of three remedies which act simultaneously and supplement each other's curative action.

The Doctor wants everybody to know the surprising merits of his system. He has arranged to give a free treatment (three bottles of the cure) to all sufferers. Full instructions for use accompany each treatment. Your correspondence on the subject is strictly private and your three free bottles come to you in a plain package. Surely if you have weak lungs you will be glad to get a free treatment that is offered in such a generous spirit.

Every first-class druggist dispenses the Slocum System of Treatment in original packages, with full instructions for use.

Write to Dr. T. A. Slocum, 98 Pine Street, New York City, giving full address.

Delay only makes your trouble worse.



These Bottles Free to You

NOTE.—The Doctor Slocum System is Medicine reduced to an Exact Science by the World's Most Famous Physician. All readers of FARM AND FIRESIDE anxious regarding the health of themselves, children, relatives or friends, may have Three Free Bottles as represented in the above illustration, with complete directions, pamphlets, testimonials, etc., by sending full address to Dr. T. A. Slocum, 98 Pine Street, New York City. This is a plain, honest, straightforward offer and is made to introduce the Merits of the New System of Treatment THAT CURES, and all sufferers should accept this philanthropic offer at once. When calling on or writing the Doctor, please mention FARM AND FIRESIDE and you will receive special attention.

50 CENTS.



Cut this ad. out and send to us and we will send you this Violin and Outfit by express, C. O. D., subject to examination. Examine it at your express office and if found exactly as represented and the most wonderful bargain you ever saw or heard of, pay the express agent our special offer price, \$3.25, less the 50 cents, or \$2.75, and express charges. This is a regular \$8.00 Stradivarius Model Violin, richly colored, highly polished, powerful and sweet in tone, complete with fine maple bow, one extra set of strings, violin case, rosin and one of the best instruction books published. Write for free musical instrument and organ and piano catalogue. Address, SEARS, ROEBUCK & CO., CHICAGO, ILL.

High Arm \$10 to \$25 SAVED in buying direct from factory. 30 days free trial. No agents' large profits to pay. No money in advance. \$65 Keweenaw Machine for \$22.50. No better Machine at any price. \$50 Arlington Machine for \$19.50. Other Machines \$8.00, \$11.50 and \$15.00 all attachments free, over 100,000 in use. Catalogue and testimonials free. Write today for special freight offer. CASH BUYERS' UNION, 158-164 West Van Buren St., B-7, Chicago, Ill.

\$2.90 BUYS A TANK HEATER \$6.00 Five cents worth of soft coal per day and this tank heater will heat the water for 50 head of stock, can't burn out, made from heavy GALVANIZED STEEL, 26 inches high, will keep the water from freezing in largest tank in zero weather, fire never goes out, ashes can be removed without disturbing the fire or removing heater from tank, will burn anything, no heater made requiring so little attention, nothing more durable. WRITE FOR OUR FREE AGRICULTURAL IMPLEMENT CATALOGUE. Address, SEARS, ROEBUCK & CO. (Inc.), Chicago.

HOW TO MAKE MONEY. We want one shrewd, careful man in every town to make a few thousand dollars for himself quietly at home and not work hard. Private instructions and valuable outfit of samples sent FREE. Address immediately, F. O. BOX 5308, BOSTON, MASS.

WANTED RELIABLE MEN in every locality, local or traveling, to introduce a new discovery and keep our show cards tacked up on trees, fences and bridges throughout town and country; steady employment; commission or salary; \$65.00 PER MONTH AND EXPENSES not to exceed \$2.50 per day; money deposited in any bank at start if desired. Write for particulars. THE GLOBE MEDICAL ELECTRIC CO., Buffalo, New York.

RUPTURE Sure Cure at home; at a small cost. No operation, no pain, no danger or detention from work. No return of Rupture or further use for Trusses. A complete, radical cure to all (old or young). Easy to use; thousands cured; book free (sealed). DR. W. S. RICE, Box F, Adams, New York.

Dr. HAYES, Buffalo, N.Y. ASTHMA Cured to Stay Cured

SEND FOR CIRCULARS. COOKED PEOPLE STRAIGHT the GAME SHOULDER BRACE 821 REAPER BLOCK, CHICAGO, ILL.

Extra Pay can be earned evenings by giving Stereoscopic Exhibitions. Little capital needed. Full particulars and 256-page Magic Lantern catalog free. McALLISTER, Mfg. Optician, 49 Nassau St., N. Y.

OPIUM and Liquor Habit cured in 10 to 20 days. No pay till cured. Dr. J. L. Stephens, Dept. L, Lebanon, Ohio.

PILES Absolutely cured. Never to return. A Boon to Sufferers. Acts like Magic. Trial box MAILED FREE. Address, Dr. E. M. BOTOT, Augusta, Maine.

Young men, our illustrated catalogue explains how we teach the barber trade in eight weeks, mailed free by address; most convenient branch. } MOLE R } New York } } BARBER } Chicago } } COLLEGE } St. Louis } } } Cincinnati } } } Minneapolis }

740 Silk Fringe Cards, Love, Transparent, Escort & Acquaintance Cards, LAUGHING CAMERA, Prize Puzzles, New Games, Magical Illusions &c. Finest Sample Book of CARDS Biggest list of visiting and hidden name cards in the world. All for 2c. stamp. OHIO CARD CO., Cadiz, Ohio.

SALESMEN WANTED to sell goods to wholesale and retail trade. \$100 per month and expenses. Address with stamp HULL MFG. CO., Box 46, Milton Junction, Wis.

THE YANKEE FIRE-KINDLER Builds 100 Fires with 3c of oil. No kindlings. Warranted 3 years. Greatest Seller for Agents ever invented. Sample with terms prepaid, 15c. YANKEE KINDLER CO., GENEY, ILL., 37 Sta. O.

PILES Instant relief; final cure in a few days. Never returns; no purge; no salve; no suppository. Remedy mailed free. Address C. J. MASON, Box 519, NEW YORK, N. Y.

Send 2c. for our fine SAMPLE BOOK of all the Latest Genuine Bevel-edge, Silk fringe, Envelope, Hidden Name, Calling, Satin Photo & Ribbon Cards, with Agent's Outfit & Premiums for 1899. BUCKEYE CARD CO., B9, LACEYVILLE, OHIO.

CARDS Send 2c. stamp for Sample Book of all the FINEST & LATEST Styles in Beveled Edge, Hidden Name, Silk Fringe, Envelope and Calling Cards for 1899. YES, GENUINE CARDS, NOT TRASH. UNION CARD CO., 111 Columbus, Ohio.

700 Sample Styles of Silk Fringe Cards, Hidden Name Cards, Love Cards, Scrap Pictures, Games, Puzzles, Album Verses, The Star Puzzle, 13 Puzzle, and Agents Sample Album of our latest Cards. Send a 2c. stamp for postage. BANNER CARD CO., CADIZ, OHIO.

If afflicted with SORE EYES DR. ISAAC THOMPSON'S EYE WATER

LADIES! A friend in need is a friend indeed. If you want a regulator that never fails, address THE WOMAN'S MED. HOME, Buffalo, N. Y.

PLAYS Dialogues, Speakers for School, Club and Parlor. Catalogue free. T. S. DENISON, Publisher, Chicago, Ill.

FITS A Great Remedy Discovered. Send for a FREE package & let it speak for itself. Postage 5c. DR. S. PERKEY, Chicago, Ills.

CARDS FOR 1899. 50 Sample Styles and List of 70 PREMIUM ARTICLES FREE. HAVESFIELD PUB. CO., CADIZ, OHIO

GOOD PAY TO GOOD MEN, enclose stamp. Manu. Adv. Co., Dept. H, 114 W. 34th St. N. Y.

RUBBER GOODS of every description. Cat'lg free. Edwin Mercer & Co., Toledo, O.

WRITERS WANTED to do copy at home. Law College, Lima, O.

ALL KINDS OF WATCHES from 95c. upward. Catalogue sent free. Safe Watch Co., P. O. Box 150, N. Y.

BED-WETTING CURED. Sample FREE. Dr. F. E. May, Bloomington, Ill.

GERMAN MEALS

And yet, in your sane moments, you will have a sneaking affection for the statement that a German is a German because he eats what he eats. As a rule he may be said to eat five times a day. He starts early in the day with a cup of café au lait and a small buttered roll. This keeps him going until eleven, when he demolishes a slice of buttered rye-bread with slices of hard-boiled egg, raw chopped beef, or cheese. This he washes down with a glass of ale, thus stilling his inner man till dinner-time. Dinner takes place toward one o'clock, and consists of soup (generally nourishing), a plate of meat, with potatoes and fruit (cranberries, prunes or apricots), occasionally cheese; seldom sweets, rarely a green vegetable. Three hours later coffee is taken, served with a piece of cake or thick bread and butter. This is the hour precious to the gossip and the busybody, the time for spreading scandal. Toward eight the appetite again asserts itself; the hour of the ubiquitous sausages has arrived; their name is legion, and they share the honors with slices of ham, smoked goose breast, pieces of raw pickled herring, and, in summer, hard-boiled eggs and potato salad. Such is the German method of spreading the meals over the day.—Walter Cotgrave, in Lippincott's.



A WASP'S MISTAKE

It is generally supposed that instinct unerringly teaches birds and insects the best way in which to build their homes or nests, and also to provide for their offspring. The following incident, recently under personal observation, will show that instinct is not always infallible:

A friend placed three small empty vials in an open box on a shelf in an upright position, in close contact, and they were uncorked. A short time afterward it was a matter of surprise to find that these had been appropriated by a female mud-wasp. She had placed a goodly number of spiders in the center of the vial, doubtless intended to serve as food for her future brood; then proceeded to deposit her eggs in those on either side. She next closed tightly the mouths of all three receptacles with a hard lime cement. Having finished her work she then doubtless went on her way, satisfied all had been done for her offspring that a thoughtful mother could do.

But just think of the sensations of those little wasps when they come into existence, for while starving in their sealed cages they can plainly see through the impenetrable glass walls the bountiful supply of food which was provided for their use.—Scientific American.



DID SPAIN GIVE US "YANKEE DOODLE?"

It is interesting to note, in view of Spain's many unsuccessful contentions, that that country also claims the tune of "Yankee Doodle" as its own. The critics, however, have denied her even this crumb of comfort. The tune of "Yankee Doodle," it has been decided, probably came to us from Holland, by the way of England. The foundation for the Spanish claim is given by Dr. Louis Albert Banks, in his new book, "Immortal Songs of Camp and Field," together with the claims of Hungary, Holland, France and Italy. As to the Spanish claim, Dr. Banks tells us that Mr. Buckingham Smith, the American Secretary of Legation, wrote from Madrid, under the date of June 3, 1858, as follows:

"The tune of 'Yankee Doodle,' from the first of my showing it here, has been acknowledged by persons acquainted with music to bear a strong resemblance to the popular airs of Biscay; and yesterday a professor from the North recognized it as being much like the ancient sword-dance played on solemn occasions by the people of San Sebastian. He says the tune varies in those provinces. The first strains are identically those of the heroic Danza Esparte of brave old Biscay."—Literary Digest.



AN EXPERT ON ONE SIDE ONLY

"When I was a boy," said the somber-visaged man, "it used to be a common thing to debate the question: 'Which is greater, the joy of anticipation or that of realization?'"

"My recollection is that that question was never settled definitely, though the judges might give a verdict. And after all these years, so far as my experience goes, the question remains unsettled yet. As to the joys of anticipation I consider myself a qualified expert; but if there is any joy in realization I must rely for a knowledge of that upon the testimony of others."—New York Sun.

THE MAN THAT WOMEN WRITE TO

There's a man in Buffalo, who has without doubt, a larger number of woman correspondents than any other person, man or woman, in the entire country. And yet not one in a thousand of the women who write have ever seen the man they write to. For after all it's not the man they write to, but the physician. There's no sex in medicine. The physician with this extensive correspondence is Dr. R. V. Pierce, chief consulting physician of the Invalids' Hotel and Surgical Institute, of Buffalo, N. Y.

Undoubtedly Doctor Pierce owes his great popularity among women to his many and wonderful cures of that class of diseases known as "female troubles." To the treatment and cure of these diseases he has given over thirty years of his professional life, and has established himself as the specialist par excellence in the treatment of diseases peculiar to women.

The esteem in which Dr. Pierce is held by women is not to be wondered at when it is known that in the thirty years, and over, in which he has given attention to women's diseases, he has, aided by his staff

not a physician, and has neither the educational ability nor the legal right to treat disease. And sometimes, because it is impossible for these advertisers to lay claim to the title of physician, they raise a clamor of "write to a woman." "Woman understands woman," hoping doubtless by this artifice to draw away attention from the fact that they do not and cannot offer the advice of a qualified physician. But women are quick to see that a woman unless educated in medicine and qualified to practice, can give no advice upon disease that would not be liable to be as dangerous as the disease itself. For there is no place where ignorance is so dangerous as when it undertakes to meddle with a woman's health.

That class of advertisers who raise the cry of "write to woman" are getting to be known as "bearded women," because the "woman in the case" is a mere figure-head, a stalking horse to shelter the man who preys on woman's confidence. An example of the peculiarly preposterous claims made by these people is found in the claim that "a man can't understand a woman—just because he is a man." The only way in which this can be interpreted as true is by accept-

ments. It's only the woman of the advertisements, the "woman" for revenue only, and who is not a physician, who can afford to make such amazing and ridiculous claims.

But this side issue has led us somewhat afield from Dr. Pierce and his great host of women correspondents. To these the doctor stands a sort of father confessor of things physical. Every letter is read privately, answered privately, and its contents guarded as sacredly as becomes such confessions. And as many women are naturally sensitive about their ailments even the replies are mailed, carefully and securely sealed in a perfectly plain envelope, without printing or advertising upon it, that there may be no third party to this correspondence.

Any sick woman can have the benefit of consultation by letter with Dr. Pierce absolutely without fee or charge of any kind.

More than half a million invalid women have been successfully treated by Doctor Pierce, aided by his staff of skilled specialists, through the medium of correspondence. In this way disagreeable questionings and abhorrent examinations and "local treatments" are avoided.

The world at large knows of Doctor Pierce, chiefly as the inventor of the two well-known remedies, Dr. Pierce's Golden Medical Discovery and Doctor Pierce's Favorite Prescription. And it is probably the case that in general Dr. Pierce's remedies are classed with all the other "patent medicines" and Dr. Pierce himself ranked with those "doctors" whose degrees are purely honorary or assumed, and no more stand for medical knowledge or experience, than the familiar title of "Major" in some sections of our country, signifies that the bearer of it is familiar with siege and battle. Dr. Pierce does not belong to the class of doctors whose titles are by courtesy only. He is a doctor by choice, a doctor by education, a doctor by practice and experience.

Dr. Pierce's remedies differ from most medicines in the fact that they contain no alcohol, whisky or other intoxicant, and are absolutely free from opium and every other narcotic drug. For no other medicine prepared exclusively for the use of women, as is "Favorite Prescription," can such a claim be truthfully made.

The difference between Dr. Pierce's establishment and all "patent medicine" establishments is very remarkable, and is apparent at once to every person who has had the opportunity of actually comparing Dr. Pierce's laboratory with that of any other institution. For instance, since Dr. Pierce has advertised to give free consultation by letter, many have imitated the advertisements and make an exactly similar offer. As far as the advertisements go they make just as good a showing as Dr. Pierce. But go to these other establishments and ask to see the "doctor," who gives medical advice, and you'll find, nine times out of ten, that there is no doctor connected with the establishment. Compare this with Dr. Pierce's institution, the Invalids' Hotel and Surgical Institute, with its staff of nearly a score of graduated and experienced doctors, busy every day in actual practice, its great special laboratory and dispensary, from which special medicines and auxiliary treatment are sent out daily to all parts of the country, its hospital with its surgical and mechanical appliances and operating rooms. In such a comparison you see at a glance that there is no institution equal to Dr. Pierce's in the whole country.

In the work of the World's Dispensary, and Invalids' Hotel and Surgical Institute, there is real philanthropy as well as real medical and surgical skill. The best recognition of the philanthropic aspect of this work comes from the citizens of Buffalo, Dr. Pierce's home town, who elected him State Senator, and later gave him a seat in Congress. From the latter position Dr. Pierce resigned before the expiration of his term. That he should prefer to give up a high and honorable position in the councils of the Nation, to serve the sick, is conclusive evidence of his devotion to their interests and of love for his profession. Perhaps we can offer our readers no better summing up of Dr. Pierce and his work than that of President Garfield, who said, "He is one of the best men in the world, and he is at the head of one of the best institutions in the world."



HOW TO LIVE LONG

Make cleanliness your motto. Wear no tight clothing. Ventilate your sleeping-room. Beware of gluttony. If the appetite is dull eat fruit only or eat nothing. Use no fiery condiments, but live chiefly on natural grains, vegetables and fruit.—New York Ledger.



DR. R. V. PIERCE AND SOME OF THE PROMINENT SPECIALISTS OF HIS STAFF

of nearly a score of experienced and skilled specialists, treated over a half a million women, and with such success that ninety-eight out of every hundred treated have been absolutely and altogether cured.

Doubtless there are other reasons why multitudes of women consult Dr. Pierce by letter, and as not the least among such reasons women would set down the friendly, even fatherly advice which the age and experience of Dr. Pierce enables him to give as supplemental to the advice and instructions of the physician. Women, also, are not slow to remember that Dr. Pierce, through his method of consultation by correspondence, was the first physician to offer them relief from the unpleasant questions, the offensive examinations, and the local treatments, generally inseparable from the treatment of diseases of women by local practitioners.

Of course, Dr. Pierce has had many imitators, who steal the terms which his advertisements have made familiar, to use them as their "catch-words," and so to draw the attention of women in their direction. The most noticeable feature of these imitations is that, women with dangerous diseases are urged to consult by letter some one who is

ing the statement in its bare literalness as of man and woman. But it is to be noticed that there is a vast difference when you qualify the terms man and woman by the term physician. How easy it would be for such advertisers to say, "write to a woman physician because a man physician cannot understand a woman, just because he is a man." How easy it would be to do this if the "woman" who invites correspondence could or dared write M. D. after her name, and even then, how preposterous the statement would remain. For two thousand years the practice of medicine has been entirely in the hands of men, as it is in general today. Woman in medicine is a new thing, so new that she has not entered to any known extent into the field of surgery. Whatever any woman practitioner has learned of medicine, she must have learned in schools, taught by men, and from books written by men. What a paradox therefore is presented in the claim that the man who has taught woman all she knows about medicine does not know anything about medicine himself.

Women who are educated in medicine would be the first to laugh at such state-

OUR MISCELLANY

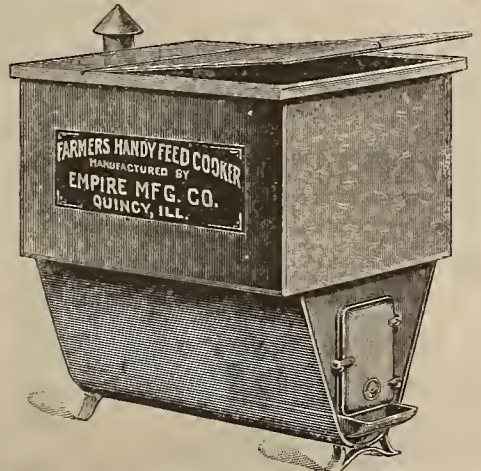
When "catching cold" it is safest to get a doctor's prescription. One of the best of these is Jayne's Expectorant.

AFTER a hundred days of war peace is restored. May it be universal and eternal. It has been a remarkable war—remarkable in its brevity, its geographical scope, its mammoth execution. In the exemplified prowess of American arms, the brilliant demonstration of destructive power exhibited by the American navy, the unrivaled stamina and gallantry and genius for battle of American manhood furnished by both her soldiers and her sailors. These have opened the eyes of a supercilious world and planted the Star-spangled Banner of freedom upon the exalted heights of universal respect. Spain awoke a sleeping infant, but to confront an aroused giant, and the world has seen the glory of the flag.—Cincinnati Commercial-Tribune.

Of all the mills made by the Foos Manufacturing Co., Springfield, Ohio, may be mentioned style L, No. 1. The sales are constantly increasing. C. W. Anderson, of Norwalk, Ohio, has recently written the manufacturers that after using it on cob and corn, and also oats, he is satisfied that it is the best of its kind on the market. Those who are interested in the mill question should write the manufacturers for descriptive circulars.

FARMER'S HANDY FEED COOKER

Reader's attention is called to this device, which is sold at \$12.50 for 50-gallon capacity. By feeding poultry and animals cooked food during winter at least one third of the feed is saved; also having



stock in a healthy condition, preventing hog cholera among your hogs and insuring the hens laying freely during the winter months. On application to the Empire Manufacturing Co., Quincy, Ill., a catalogue giving full description may be obtained. They are made in all sizes.

SPANISH FOR "HIGH LIFE"

The perversion of English words when adopted by foreigners is often strange, as in the Franco-English "hiftek;" but this, if we may trust a correspondent, has been far transcended by the journalists of Spain, who are said to have adopted a slang which appears in the form of "igili" or "gili." It is rather a puzzler to he told that the word is English. What is really meant is "high life."—London Chronicle.

FREE HOMES IN WESTERN FLORIDA

There are about 1,000,000 acres of Government land in Northwest Florida, subject to homestead entry, and about half as much again of railroad lands for sale at very low rates. These lands are on or near the line of the Louisville & Nashville Railroad, and Mr. R. J. Wemyss, General Land Commissioner, Pensacola, will be glad to write you all about them. If you wish to go down and look at them, the Louisville & Nashville Railroad provides the way and the opportunity on the first and third Tuesday of each month, with excursions at only \$2 over one fare for round-trip tickets. Write Mr. C. P. Atmore, General Passenger Agent, Louisville, Kentucky, for particulars.

LANGUAGES IN THE SWISS PARLIAMENT

Switzerland differs from other countries in many things, and one of the most remarkable is the way in which its parliamentary debates are conducted. A Swiss member of parliament can express himself in French, German or Italian, and the privilege is freely used. When the president of the federal assembly speaks in German his remarks are translated by a secretary in close proximity to him. All the laws and resolutions, before being voted upon, are drawn up in French, German and Italian, and every official report is published in these three languages.—Birmingham Post.

BIG DROP IN DRESS GOODS

Every one can now buy Dress Goods of every description and from one yard upwards, for just as little money as the largest merchants can buy in quantities. You will receive free by mail post-paid, a book of 60 cloth samples of latest things in all kinds of Dress Goods, at 12¢. to \$1.25 per yard, also full instructions how to order, etc., if you will cut this notice out and mail to the big reliable house of SEARS, ROEBUCK & CO. (Inc.), Chicago.

A SIMPLE REMEDY

A physician, in taking a patient's temperature, placed beneath her tongue the thermometer for that purpose. The next time he visited her the woman exclaimed, as he produced the instrument:

"Oh, doctor, I'm so glad you brought that along. I never had anything do me so much good before in my life."

RAILWAYS PROMOTE PROSPERITY

It has been truly said that every prosperous railroad carries its prosperity into every city and hamlet upon its line. Railroads in prosperous conditions spend their money liberally along their lines in the way of improvements. So long as the earnings of a railroad are kept up, their employes are able to earn good salaries, and it is to the interest of every business man to have railway employes earning good salaries, because no class of people are larger consumers in proportion to the amount of their income than are the railroad employes.

A compulsory reduction of passenger fares will affect the prosperity of any railroad when the average earnings are barely above two cents per mile for each passenger carried. The average in Indiana for last year was a fraction over two cents per mile. The earnings for the current year have been on the down grade and expenses have been largely increased by the war tax, so that the showing is not favorable. The deduction is clear that a two-cent fare law will not fail to cripple the railways and business in general.

AN UNFORTUNATE INTERFERENCE

Diddereau—"Did you attend the lecture of Prof. Hardhead on 'Grip, a Malady of the Imagination?'"
Biddereau—"He did not lecture."
Diddereau—"Why not?"
Biddereau—"Down with the grip."—New York Weekly.

TO THE LAND OF SUNSHINE

Take the Sunshine Route from Chicago to Los Angeles, San Francisco and other points in California, and escape the rigors of winter in the East and North.

Pullman Tourists Cars for first and second class passengers leave Chicago every Saturday at 2 o'clock p. m. via the Chicago, Milwaukee & St. Paul Railway to Kansas City, thence to California via the Atchison, Topeka and Santa Fe Railway—a real Sunshine Route.

This is the earliest afternoon train leaving Chicago for the West after arrival of morning trains from the East, thus avoiding tedious delay.

The Sunshine Route is essentially the best and most patronized through car line for men, women and children. Every attention paid to the needs of passengers en route.

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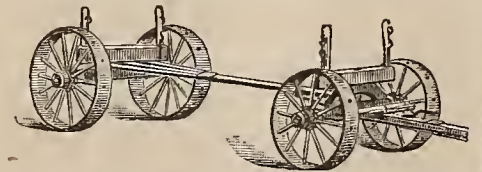
Address Robert C. Jones, Traveling Passenger Agent, 40 Carew building, Cincinnati, Ohio.

ANOTHER IN HER MIND

"That widow seared me away."
"How?"
"She has been married only once, but she always refers to the dear departed as her first husband."—Chicago Record.

FARM WAGON FOR ONLY \$19.95

In order to introduce their Low Metal Wheels with Wide Tires, the Empire Manufacturing Co., Quincy, Ill., has placed upon the market a Farmer's Handy Wagon, sold at the low price of \$19.95. The wagon is only 25 inches high, fitted with 24 and 30 inch wheels with 4 inch tire.



This wagon is made of best material throughout, and really costs but a trifle more than a set of new wheels and fully guaranteed for one year. Catalogue giving a full description will be mailed upon application by the Empire Manufacturing Co., Quincy, Ill., who also will furnish metal wheels at low prices made any size and width of tire to fit any axle.

SHOEMAKER'S POULTRY BOOK

And Almanac for 1899. 160 pages, 100 illustrations of Fowls, Incubators, Brooders, Poultry Houses, Poultry Supplies and largest Poultry Farm. Tells how to raise Chickens successfully, their care, diseases and remedies. Diagrams with full description to build best poultry houses. All about Incubators, Brooders and thoroughbred Fowls, with lowest prices. Printed on good paper in two colors. Price only 15c. Money back if not pleased. C. C. SHOEMAKER, Box 965, Freeport, Illinois.

BUY YOUR WALL-PAPER BY MAIL from the manufacturers. Samples sent free. Prices 8c to \$3 a roll. KATSER & ALLMAN, 1214-1216 Market St. Phila.

WANTED Man or lady to travel and appoint agents. Est. firm. \$50 per month and expenses to start. P. W. ZIEGLER & CO., 222 Locust St., Philadelphia.

INCUBATORS Best ever invented; self-regulating. For Catalogue, G. S. SINGER, Cardington, O. Agents wanted.

FINE SILVERWARE FREE

THIS SILVER-PLATED WARE can be used in cooking, eating and medicines the same as solid silver. The base of this ware is solid nickel-silver metal, and being perfectly white and hard it will never change color, and will wear a lifetime. This ware will not, cannot turn brassy, corrode or rust. We absolutely guarantee that each and every piece of this ware is plated with the full STANDARD amount of pure coin-silver. In beauty and finish it is perfect.

FULL SIZE

All of the ware is full regulation size. Dessert-forks are specially designed for cutting and eating pie, and dessert-spoons are proper spoons with which to eat soup.

GUARANTEE

We guarantee every piece of this ware to be exactly as it is described and to give entire satisfaction or money refunded.

Will Stand Any Test To test this silverware use acids or a file. If not found to be plated with the full standard amount of pure coin-silver and the base solid white metal and exactly as described in every other particular we will refund your money and make you a present of the subscription. If returned to us we will replace free of charge any piece of ware damaged in making the test.



INITIAL LETTER Each piece of this ware (except the knives) engraved free of charge with an initial letter in Old English. Only one letter on a piece. Say what initial you want.

The base of the table-knives is fine steel highly polished. They are first plated with nickel-silver, which is as hard as steel, then plated with 12 pennyweights of coin-silver. The best silver-plated knives on the market. For want of space pictures of the Gravy-ladle, Berry-spoon, Pie-knife and Child's Set are not shown here, but they are all of the same design and full regulation size.

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For Ten Dollars we will send each and every set and piece of silver-plated ware named below, 50 pieces in all, and Twelve Yearly Subscription Certificates to Farm and Fireside. For a Club of 50 Yearly Subscriptions to Farm and Fireside we will send, free of charge, the complete set of silverware, 50 pieces in all.

In the above cases the complete set of silverware must be ordered at one time and sent to one address. This offer is not good to subscribers living outside of the United States. Each Subscription Certificate, when returned to us, will be good for a year's subscription to Farm and Fireside to any address.

PREMIUM OFFERS

We will send the Farm and Fireside one year and the Silverware to any one at the following prices.

Farm and Fireside 1 year and a Set of 6 Teaspoons for	\$.75
Farm and Fireside 1 year and a Set of 6 Forks for	1.25
Farm and Fireside 1 year and a Set of 6 Tablespoons for	1.25
Farm and Fireside 1 year and a Set of 6 Knives for	1.75
Farm and Fireside 1 year and a Set of 6 Coffee-spoons for	.75
Farm and Fireside 1 year and a Set of 6 Dessert-spoons for	1.00
Farm and Fireside 1 year and a Set of 6 Dessert-forks for	1.00
Farm and Fireside 1 year and Berry-spoon for	.60
Farm and Fireside 1 year and Pie-knife for	.60
Farm and Fireside 1 year and Gravy-ladle for	.60
Farm and Fireside 1 year and Butter-knife and Sugar-shell (both) for	.50
Farm and Fireside 1 year and Child's Set (Knife, Fork and Spoon) for	.60

(When any of the above offers are accepted the name may be counted in a club.)

SILVERWARE FREE

For Clubs of Subscribers to the Farm and Fireside

Set of 6 Teaspoons given free for a club of four subscribers.
Set of 6 Forks given free for a club of seven subscribers.
Set of 6 Tablespoons given free for a club of seven subscribers.
Set of 6 Knives given free for a club of twelve subscribers.
Set of 6 Dessert-spoons given free for a club of five subscribers.
Set of 6 Dessert-forks given free for a club of five subscribers.
Set of 6 After-dinner Coffee-spoons given for a club of four subscribers.
One Berry-spoon given free for a club of three subscribers.
One Pie-knife given free for a club of three subscribers.
One Gravy-ladle given free for a club of three subscribers.
Both Sugar-shell and Butter-knife (both) given free for a club of two subscribers.
One Child's Set (Knife, Fork and Spoon) given free for a club of three subscribers.

(Postage or expressage on the silverware paid by us in each case.)

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THIS BIG CATALOGUE CONTAINS 1120 PAGES is 9x12x2 inches in size, contains over 100,000 quotations, 10,000 illustrations, the largest, most complete and lowest priced catalogue ever published. HAMES THE LOWEST WHOLESALE CHICAGO PRICES ON EVERYTHING, including everything in groceries, drugs, dry goods, notions, clothing, cloaks, dresses, boots and shoes, watches, jewelry, books, hardware, stoves, agricultural implements, furniture, harness, saddles, buggies, sewing machines, crockery, organs, pianos, musical instruments, furnishing goods, guns, revolvers, fishing tackle, bicycles, photographic goods, etc. Tells just what your storekeeper at home must pay for everything he buys and will prevent him from overcharging you on anything you buy; explains just how to order, how much the freight, express or mail will be on anything to your town. THE BIG BOOK COSTS US HEARLY \$1, the postage alone is 30 cents.

OUR FREE OFFER. Cut this advertisement out and send to us with 15 cents in stamps to help pay the 30 cents postage and the Big Book will be sent to you FREE by mail postpaid, and if you don't say it is worth 100 times the 15 cents you send, as a key to the lowest wholesale prices of everything, say so, and we will immediately return your 15 cents.

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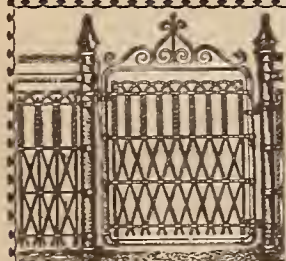
Address, **SEARS, ROEBUCK & CO. (Inc.), CHICAGO, ILL., U. S. A.**



Often in the morning there comes a feeling of weariness, indescribable; not exactly ill, nor fit to work, but too near well to remain idle.

A Ripans Tabule taken at night, before retiring, or just after dinner, has been known to drive away that weariness for months.

A new style packet containing TEN RIPANS TABULES in a paper carton (without glass) is now for sale at some drug stores—FOR FIVE CENTS. This low-priced sort is intended for the poor and the economical. One dozen of the five-cent cartons (120 tabules) can be had by mail by sending forty-eight cents to the RIPANS CHEMICAL COMPANY, No. 10 Spruce Street, New York—or a single carton (TEN TABULES) will be sent for five cents.



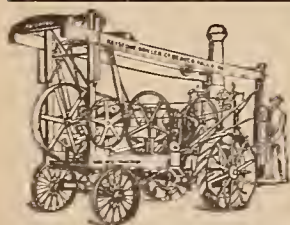
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With our all Steel Automatic Machine Capacity 70 Rods per day. We sell Galvanized fence, Barb, Baling wire, and our Famous High Carbon Coil Spring Wire. Twenty different styles of Yard, Lawn, church, and cemetery fences. Farm fence in the roll. Farm and yard gates, the best and strongest steel line and anchor posts made, in fact all kinds of fence supplies direct to the consumer at the very lowest Wholesale Prices. Write for our Catalogue and price list and save the middleman's profit.

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KOKOMO FENCE MACHINE CO., KOKOMO, IND., U. S. A.



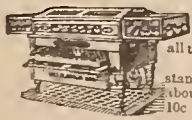
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All kinds of Drilling Tools.

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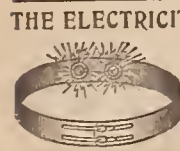
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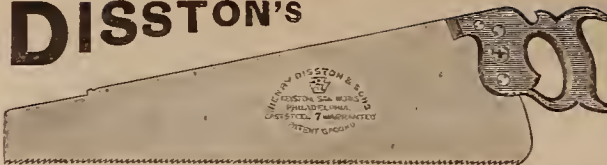
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Our "99" booklet now ready, contains Ex-Gov. Howard's views. Every up-to-date Farmer should read it. Mailed free if you name this paper. Also Cat. of Silo Machinery, BANGER BROS. SILOS, 50, 75, 100 tons. Farm Powers, Feed Mills, Root Cutters, Corn Shellers, and two hole. SMALLEY MFG. CO., Sole Makers, Milwaukee, Wis.



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It will pay you to buy a Saw with "DISSTON" on it. It will hold the set longer, and do more work without filing than other saws, thereby saving in labor and cost of files. They are made of the best quality crucible cast steel, and are

FULLY WARRANTED. For Sale by all Dealers.

Send for Pamphlet, or "Saw Book," mailed free. HENRY DISSTON & SONS, Philadelphia, Pa.

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Twenty-eight sizes and styles, \$1.50 to \$275.00

No.	Clamps to table,	Price, \$2.00
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FOR CHOPPING Sausage and Mince Meat, Hamburg Steak for Dyspeptics, Tripe, Hoghead Cheese, Suet, Codfish, Coconut, Clams, etc.

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Farm and Fireside says:

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Our trade-mark "Enterprise" is on every machine. Send 4c. in stamps for the Enterprising Housekeeper—200 recipes.

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THE ENTERPRISE MFG. CO. OF PA. THIRD & DAUPHIN STS. PHILADELPHIA.



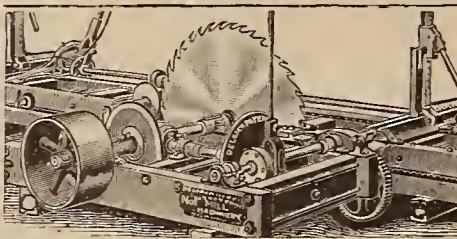
The Farmers' Dollar

is as big and as round and is worth just as much as any other dollar. He is just as much entitled to his dollar's worth as anybody else. When he buys a plow he wants one that is worth the money. He expects, as he has a perfect right to, to get his money's worth.

When he buys the "Oliver Chilled Plow" he knows that he gets his money's worth every time.

That's one reason why we have been able to sell him over 1,800,000 of the "OLIVER CHILLED PLOWS." Isn't that fact a sufficient guarantee of quality? A better plow, of better material in a better factory cannot possibly be made. The "Oliver Chilled Plow" Works are the largest and best equipped plow works in the world. Write us for free facts and full particulars.

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The celebrated "DeLoach" Patent Variable Friction Feed Saw-mills are recognized as the standard in mechanical skill. Prices from \$100.00 up. Four H. P. warranted to cut 2,000 feet of lumber per day. Send for large catalogue of Saw-mills, Shingle-mills, Planers, Grinding-mills, Rolling-presses, Water-wheels, etc. DeLOACH MILL MFG. CO., 300 HIGHLAND AVE., ATLANTA, GEORGIA.

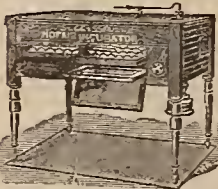


50 CTS. FOR CORN

That's what every bushel of corn is worth after being ground on our Scientific Grinding Mill

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"SUCCESSFUL" DES MOINES INCUBATOR CO., Box 61, Des Moines, Ia.

A Feed Cooker for \$5.00

Many farmers and poultrymen have not used feed cookers in the past because they considered the price too high. To meet this case we have designed the

RELIABLE FEED COOKER AND WATER HEATER.

It is an ideal means for cooking food for stock or poultry and for heating water for scalding hogs. Made of best cast iron, with No. 22 galvanized steel boiler. 20 gal. size \$5.—burns wood only. 50 gal. size \$12. and 100 gal. size \$16. burn either wood or coal. Don't buy until you get our free circulars. RELIABLE INCB. & BROODER CO. Box 41, QUINCY, ILL.



"PLANET JR." CHAPTERS.—I. The Mortgage Lifters at Work

The New "PLANET JR." CATALOGUE photographic views, showing these California orange-groves, in Jersey farms, in French vineyards. They where at work making money—

Are you making money? This Catalogue will show you how to make more. The pictures are intensely interesting—but the tools are still more so. The Catalogue is sent free if you write to

Watch for Chapter II, about onion-growing in Rhode Island, with the Hill-Dropping Drill.

S. L. ALLEN & CO., Box 1107 F Philadelphia.



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FARM & FIRESIDE.



VOL. XXII. NO. 8

EASTERN
EDITION

JANUARY 15, 1899

Entered at the Post-office at Springfield,
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TERMS 50 CENTS A YEAR
24 NUMBERS



A BOOK YOU WANT..

Destiny has suddenly made the United States an empire. The fortunes of war have added to her care and ownership rich tropical islands in the Atlantic and Pacific oceans. They are Uncle Sam's, yet they are strangers, for want of accurate pictorial knowledge of them. This want is fully supplied by our new book of photographic views. Turning its pages is like the passing of a grand panorama. Its realistic pictures present to the eyes beautiful and marvelous sights in those fertile island countries. Size of each page 8 inches by 11 $\frac{1}{4}$ inches.

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The book contains over 300 views of picturesque scenes and interesting objects in Cuba, Porto Rico, Hawaii and Philippine islands; also numerous fine scenes in the United States associated with the Spanish-American war; as, camp pictures, life in the army and on the war-ships, etc. See sample pictures on pages 1, 2, 23 and 24.

This Grand Book, and
This Paper One Year, **40c.**

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This Book Given FREE for a Club of TWO
Yearly Subscribers to the Farm and Fireside.

Order by Premium Number 43 and Address

FARM AND FIRESIDE, Springfield, Ohio





Raising the American Flag Over the Capitol of Hawaii During the Annexation Ceremonies, Held at Honolulu August 12, 1898

OUR new book, "Photographic Panorama of Our New Possessions," contains over 300 views which are a marvel of scenic beauty, fascinating entertainment and valuable instruction. The pictures are so enticing and so easy to comprehend that school-children will pore over the book for hours in deepest interest, while parents and teachers will find it a feast for the eye and a mine of timely information. The more than 300 photographs reproduced in the book represent a great deal of time and money, while some of them were taken at moments of extreme danger to life. Each page is 8 inches wide by 11¼ inches long.



Hours of Pleasure

The pictures on pages 1, 2, 23 and 24 are taken from our new book, and will give an idea of the hours of pleasure which can be had visiting these scenes by the aid of pictures. It will delight every member of every Farm and Fireside home.

In the book the illustrations will be very much clearer and plainer, because they are printed on costly polished paper, with presses specially adapted for this kind of work.

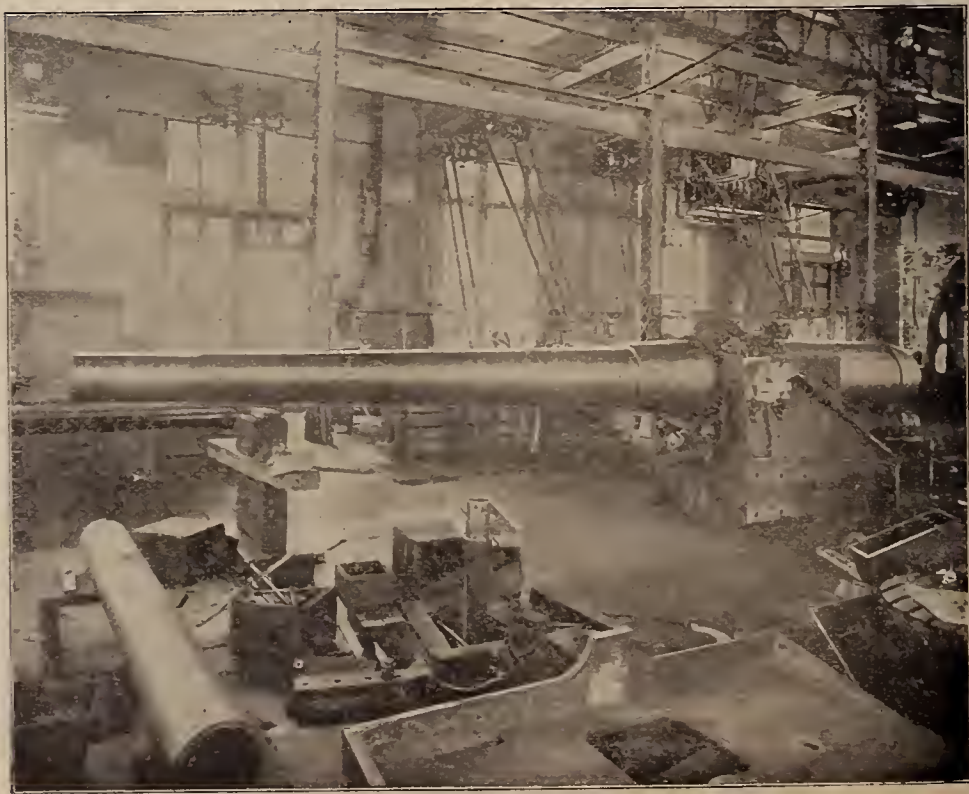
We Will Send This Book, and the Farm and Fireside One Year, for 40 Cents

(When this offer is accepted the name may be counted in a club.)

It is as easy as play to get up clubs of subscribers to Farm and Fireside and this book at 40 cents. We give valuable premiums free as rewards for getting up clubs. See our premium offers elsewhere in this number and in back numbers of the Farm and Fireside.



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*"Here lifts the taint of clouds! The mantled forms,
Made white with everlasting snow, look down
through mists of many canons."*

~

*"Grand here the scenes that burst upon his view,
Fair, too, the scene outspreading far and near.
The tumbling brook that leaps from crag to crag,
The wide, undimpled lake, whose lucent sheet
Reflects the bending forests of the shore:
While high above him spreads a canopy
Of heavenly azure and celestial light."*

~

*"I live not in myself, but I become
Portion of that around me, and to me
High mountains are a feeling, but the hum
Of human cities torture."*

~

*"I gazed upon the glorious sky
And the green mountains round,
And thought that when I came to lie
At rest within the ground,
'Twere pleasant that in flowery June,
When brooks send up a cheerful tune,
And groves a joyous sound,
The sexton's hand, my grave to make,
The rich, green mountain turf should break."*

~

RANCH LIFE IN THE ROCKIES

BY H. A. CRAFTS

It is hardly reasonable to suppose that the popular mind has become surcharged with exact information as to the extent and character of the Centennial state. The average mind, I suppose, has grasped the fact that through the state, north and south, extends the Rocky mountain range, and within its boundaries are those great plains which are included in that territory once dominated the "Great American Desert." But to be more categorical, it may be stated that the area of the state is nearly 104,000 square miles; that the plains include the eastern one third of the state, and that the western two thirds is almost entirely mountainous. Starting at an elevation of some 4,500 feet above sea-level, the Rocky mountains rise to a height of more than 15,000 feet above sea-level, and spreading westward across an immense sweep of territory touch the eastern boundary-line of Utah. By reason of its rocky and sterile soil and its rugged surface and uncongenial climate this great mountain region is rendered almost unfit for general agriculture, and by the vast majority of persons is, no doubt, supposed to be valuable only for its mineral resources. But this supposition is not well founded, for besides the great mineral deposits, vast bodies of timber and inexhaustible beds of coal, these regions afford millions of acres of excellent grazing-lands, and already support great numbers of cattle, horses and sheep. The first class predominates, as the low prices of horses that have prevailed in recent years have driven the equine herds from the range, and the sheepmen prefer the plains for grazing purposes.

*"The mountain sheep are sweeter,
But the valley sheep are fatter."*

The herds of cattle found upon the mountain ranges, however, increase and multiply, and the mountain ranchman prospers.

Under existing conditions the life of this individual is almost an ideal one. There was a time, however, when, leaving his herds to the mercy of the elements, he suffered losses that were almost heart-breaking, and the hillsides and gulches were whitened with the bones of cattle starved to death or killed by the rigors of a western blizzard. Then there came a depression of prices that depopulated many flourishing ranches, and plunged their proprietors into bankruptcy.

But brighter days have dawned to the Colorado cattleman, and his bank account is found to be on the up grade. By sad experience he has been taught that it pays to provide his cattle with shelter and food during the winter months besides that furnished by



PASTURE-LAND IN THE COLORADO MOUNTAINS

the dry grass of the hillsides and gulches and the protection of the willows that grow along the borders of the mountain streams. He has cleared, fenced and irrigated meadows, and from them garners yearly a more or less bountiful crop of hay, which he stacks near his corrals for winter feed; and with lumber from a neighboring sawmill or poles from the hillsides he builds sheds to shelter his cattle during the wintry storms. Should the winter be mild, and the snow not very deep, he is not obliged to draw heavily upon his haystacks, for the cattle like to "rustle" among the dry herbage of the range, and hay is not fed out in very liberal quantities, save to cows with calves at their sides or to some of the weaker animals. But should the snow cover the grassy slopes of the mountains and drift deeply in the valleys, so that only the tops of the tallest weeds appear above the surface, the cattle, though bravely searching for food on the ranges, come regularly to the corrals for foddering; and instead of their carcasses being found in the ravines in the springtime half consumed by hungry

tural beauty. It is lathed and plastered within, and frequently weather-boarded on the outside. In many instances it is supplied with pure, sparkling water from some neighboring spring or creek, conducted through pipes and carried even to the second floor by the force of gravity. His best rooms are carpeted, and his windows hung with tasteful curtains. His furniture is well kept, if not sumptuous, and there is likely a piano or an organ in the corner of the sitting-room for wife or daughter to shorten the hours of a long winter evening. In summer-time he frequently entertains a number of tourists from town or from the far East, thereby finding relief from the monotony of mountain life and adding a considerable amount to his bank account at the same time.

The mountain herdsman's life is relieved of much of the routine and drudgery of ordinary ranch life; nor are his household expenses so large. First, he secures his home ranch either by purchase from the government or some freeholder, and then enlarges his grazing facilities by purchase or lease.



RANCHMAN'S HOME AND SUMMER COTTAGES IN THE ROCKY MOUNTAINS

coyotes, they go through the winter in fair shape, and quickly put on additional flesh as soon as the grass shows green on the hills.

The life of a mountain ranchman is certainly an enviable one. He selects for his homestead some picturesque mountain glen,

Frequently he has the free use of tracts of government land, it being favorably situated with reference to his own holdings and not especially available to a new-comer. Government lands, of course, are not subject to lease, but there are large areas of state school

lands, railroad land grants and lands owned privately that can be leased on easy terms; and these make excellent pasture-lands for cattle. Many mountain ranches are fenced, in part or whole, with poles and barbed wire. This saves much riding over the ranges and keeps out stock that might stray from abroad. The ranchman's fuel is always close at hand, and can be had for the cutting and hauling. His meat is running upon his range, and can be slaughtered at any time that it is needed. The stream that runs through his own lands usually supplies him with an abundance of mountain trout, and if he is anything of a hunter he can take his gun, mount his broncho, go up into the timbered heights and kill wild game—deer, elk, antelope, rabbits, grouse, sage-hens, etc. Along the alluvial bottom-lands that border the mountain streams he can raise a supply of excellent vegetables. If so disposed he can keep his pigs and chickens, but the feed for both usually has to be obtained from town or from some ranch upon the plains. Still, the mountain ranchman is experimenting successfully with wheat, oats and barley. Living quite a distance from town, he makes his purchases in annual or semi-annual instalments; and not having the constant temptation before him to make unnecessary purchases, like the farmer who has daily access to town, he runs up no accounts at the stores, but pays cash, getting the best at the lowest possible price. Nor do the exactions of a metropolitan life make it incumbent upon his wife and daughter to patronize the dress-maker, the milliner and dry-goods dealer at too frequent intervals in order to keep pace with the changing fashions.

During the primary age his children attend the district school, which is kept in a little log school-house, built upon a pine-clad hillside and taught by a young lady high-school graduate from town. When old enough the children are sent away to attend high school, college or seminary in some distant town. So the mountain ranchman of Colorado lives a free and wholesome life. He lives out of doors and upon horseback nearly all the year round. No matter whether it is to look after his herds or to visit a neighbor upon some errand, the pony is saddled and away he flies, up hill and down dale, almost as free as the birds of the air. For the doctor, the lawyer and even the minister he has little use, as he is generally in a state of moral, physical and spiritual health. Yet when some itinerant preacher appears in the neighborhood he is welcomed and given the best that the house affords; and on Sundays there are services in the little log school-house, where all the dwellers in the neighborhood, both young and old, assemble to hear the good word.

Twice during the year there is a "round-up" in the spring to brand the calves; in the fall to brand what calves were missed in the spring, and to sort out the animals that are fit for beef. Sometimes the beef cattle are "cut out" and driven to the nearest railroad shipping-point and sent to market; otherwise the beef is sold at the ranch to buyers from town, who are constantly on the lookout for fat cattle. Then is received a good-sized check, which is sent off to swell the bank account in town.

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*"Mountains are the beginning and the end of
all natural scenery."*

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*"To fill the thirst of the human heart for the
beauty of God's working, to startle its lethargy
with the deep and pure agitation of astonishment,
are their missions. They are us a great and
noble architecture, first giving shelter, comfort and
rest, and covered also with mighty sculpture and
painted legend."*—Ruskin.

OUR FARM

FARM THEORY AND PRACTICE

BARE CORN-STUBBLE LAND.—Corn-land that is to be seeded to oats in the spring cannot well be left otherwise than bare; but when it is to be replanted to corn, as is the case oftentimes in our corn belt, it pays to have a growth of rye on such land for turning under in the spring. Crimson clover is a superior winter crop where it thrives, but it is too uncertain in the North, while rye is very sure. Unbroken land lying bare gains nothing in productive power, and loses fertility to a greater or less extent. The rye-plant cannot add to the number of pounds of nitrogen, phosphoric acid and potash in the soil, but usually no addition would be needed at all if a small portion of the inert stores in the soil could be rendered available for use by our cultivated crops. Plants vary in their power to use tough plant-food, and rye is one that can get the fertility it needs from soils that would often fail to feed many kinds of plants well. In other words, it has a strong digestion, converting inert material into vegetable tissue that in turn, when rotting, feeds other plants.

AN INVERTED SOD.—But there are cases in which a soil may be profitably exposed during the winter. When there is an old sod covering a tough clay soil that has not been stirred and exposed to the air for years we have a supply of organic material for the succeeding crop, and a winter growth is not needed as it is in the case of corn-stubble land. We do have, however, a compact soil containing fertility that can be made available by exposure to air and frost, and the right thing to do is to break the land in open days of winter, leaving the furrows well on edge and exposing the soil to the action of the weather. An intractable clay may thus be rendered friable and easily tilled, the decaying plant-roots serving to keep the soil particles from becoming compact. The time of plowing is a matter of judgment, all depending upon local conditions. No one should be deterred from breaking a compact clay sod in winter by the theories of those who have land that does not need the disintegrating influences of frost and air, but should work out the problem for themselves. I have seen some of the best farmers of this country pushing their work to get all the sod turned for corn before spring, while other equally successful farmers in another section condemned winter plowing without reservation. The difference in opinion was due to difference in soils.

FRESH MANURE BEST.—The gardener and trucker usually want fermented manures, because they use large amounts and want the manure to act quickly. Equally large amounts of raw manure would often cause a crop to burn during drought. But nine farmers out of every ten, I dare say, should apply their stock of stable manure in unfermented form. The quicker it can be gotten from the stable to the field the better, and when it is impracticable to spread it as made, it should be kept unrotted instead of being piled up in such form that it can ferment. Two reasons, out of many, may be assigned. Manure cannot be rotted without loss of a portion of its fertility, and the farmer cannot afford this loss. The trucker can do so because his supply from town is large and because a large bulk of unrotted manure in the soil is not safe. Not so with the farmer. Another reason for drawing fresh manure to our fields is that they usually lack in organic matter, becoming too cold and too compact because there is lack of fermentation of bulky manures in the soil. The fresh and bulky manure from a farm animal for a given length of time is worth much more to a thin field than the thoroughly fermented manure for the same time. The latter adds only plant-food: the former also aids mechanically.

AN UNTIDY STABLE.—Notwithstanding all that has been written about cement stable floors I venture the assertion that nineteen twentieths of our farm-horses do not stand on such floors, and that three fourths of them are not on water-tight floors. If the floor is a board one, and the bedding is as abundant as it should be, it is not best to clean out the stall every day. A horse can be kept clean and more comfortable without the daily cleaning of the floor. It took years for me to become reconciled to the idea of not cleaning a stable daily, and the appearance of the floor is less tidy when the bedding is allowed to accumulate, but the saving of the manure is too big an item not to take into account when the comfort of the horse

is not decreased. All depends upon the way the thing is done. The manure and filthy bedding should be carefully leveled twice a day, and in the evening some fresh bedding should be placed over the old. The stall is kept actually cleaner than when it is cleaned daily, and nearly all the liquid manure can be saved in this way. If the leveling is properly done the manure and bedding may be left under the fresh bedding for ten days without any heating, and can then be drawn direct to the field. Those who use box-stalls, as all should, will do well to try this plan, using bedding freely.

BUYING FERTILIZER INDIRECTLY.—The fact that wheat-bran has been used profitably as a fertilizer in the growing of field-crops should call our attention to the great value of these nitrogenous by-products to the farmer that can take out their feeding value and have remaining the greater part of the fertilizing value. When buying bran, oil-meal, gluten-meal, etc., for our farm animals we are really buying fertilizers for our soil, provided the manure from the animals is carefully saved. These feeding stuffs are so rich in plant-food that it is possible to use them directly as a fertilizer and get a profit from their use, and as their feeding value is great we would often do well to buy more of such feed, depending upon the manure for plant-food, and buy a correspondingly less amount of phosphates. It is a case wherein the cake can be eaten and yet kept to a great extent. These materials are rich in nitrogen, and it is essential that the liquid manure should not be allowed to waste, or the best part of the manurial value of these feeds would be gone. There is no safer farming than the buying of fertilizers in the form of rich feeding-stuffs that give a double return on the investment—the food value and the manurial value. DAVID.

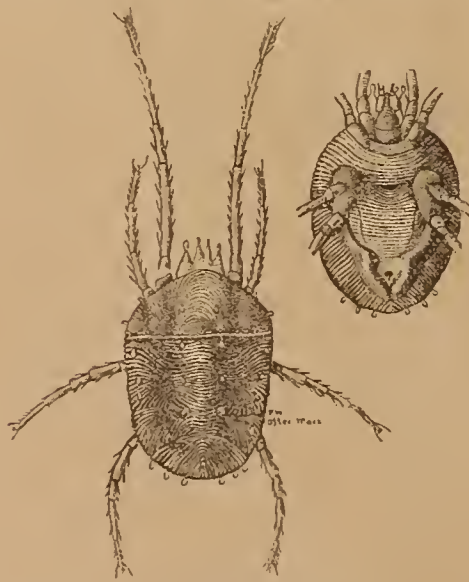
THE CLOVER-MITE

The spraying of fruit-trees for various insect pests in winter has been found to be one of the best means of keeping in control those which hibernate or whose eggs are on the trees during that season. One of these is the clover-mite (*Bryobia pratensis*), an insect widely distributed and of most variable habits.

As its name indicates, this insect is nearly related to the common red spider of green-houses, belonging to the family of vegetable-feeding mites (*Tetranychidae*) and with which it is often confused. It is, however, about twice the size of the red spider, being fully three tenths of an inch long.

Though known as the clover-mite, on account of its feeding upon that plant, yet this insect was first known as and is still an important enemy of fruit-trees, more especially on the Pacific coast and in the western states, but also in other portions of the country. The most injury seems to have been done to clover in the central states as far south as Tennessee, though it has suffered somewhat even in the East.

When attacked by the mite the leaves of the clover or fruit-trees become yellow and have a sickly appearance, as if affected with a fungous disease. Especially upon the upper sides of the tender leaves of clover the juices are extracted over irregular areas, looking more or less like the burrows of some leaf-mining larvae. Owing to the small size of the mites they may be doing considerable damage to the foliage and yet remain unnoticed, but in the egg stage the pest is



CLOVER-MITE

much more readily detected and attacked. In the more northern states the eggs are laid in the fall, and do not hatch until the next spring. Further south, however, the adult mites hibernate over winter. The eggs are of a reddish color, laid upon the bark of trees, especially in the crotches, and in the West are sometimes so thickly placed as to cover

considerable areas two or three layers deep. When the adult mites leave the clover-fields in the fall to find hibernating quarters upon fruit-trees for the winter they often become quite a nuisance by invading dwelling-houses which are in their path. This is more particularly the case throughout the Mississippi valley.

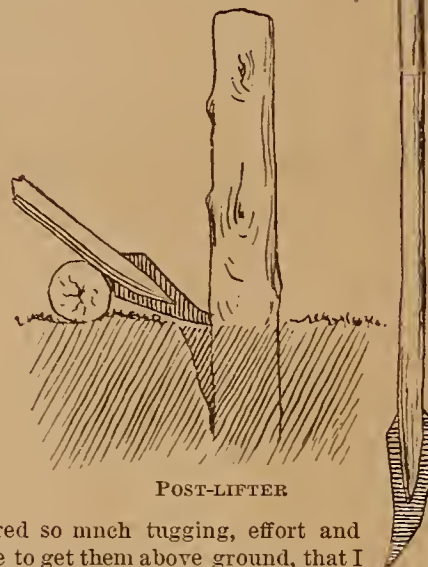
REMEDIES:—When swarming into a house their progress may be arrested by spraying the lower part of the building, walls, etc., with pure kerosene as often as necessary. Inside the house they may be destroyed by the use of pyrethrum-powder (Persian insect-powder), burning brimstone or spraying with benzene, due care being taken not to bring the latter substance near any fire.

The only practical way of protecting clover from the mite is by destroying the eggs and hibernating mites upon the fruit-trees in winter. This may be done by burning all the prunings and thoroughly spraying the trees with kerosene emulsion diluted with five parts of water, or with a mechanical mixture of twenty or twenty-five per cent kerosene and water. Such a spraying will also protect the fruit-trees from the mite, and will destroy numerous other insects, such as the pear-leaf blister-mite and plant-lice eggs, which occur upon the trees either in the egg state or hibernating as adults. Such small insects, so minute as to usually escape notice, are often responsible for a poor growth, and should be properly checked whenever known to be injurious.

E. DWIGHT SANDERSON.

POST-LIFTER

During the slack of work incident to the fall of the year I have been doing some fence-building, changing the boundaries of a large field, which has necessitated the moving of some eighty or ninety cedar posts still in sufficiently good condition to replant. These posts had been set, not driven, and had not been pointed, so that getting them out of the ground appeared at first a difficult task. Although the sod was wet, yet after working them loose in all directions, they stuck so persistently, and re-



POST-LIFTER

quired so much tugging, effort and time to get them above ground, that I decided to procure some assistance which would not only be available for the job in hand, but for future reference. I concluded if I could get a crowbar with an upturned end, which could be hammered out to a point at the blacksmith-shop, that it would answer; but failing in this, I took a stout, seasoned post about four inches in diameter and six or seven feet long, and had it shod with a heavy piece of iron with an out-turned point. With this implement, after working them loose, it was a very easy matter, with the use of another post for a fulcrum, to pry out the old posts, no matter how tenaciously they stuck.

GUY E. MITCHELL.

VENTILATING THE DAIRY-STABLE

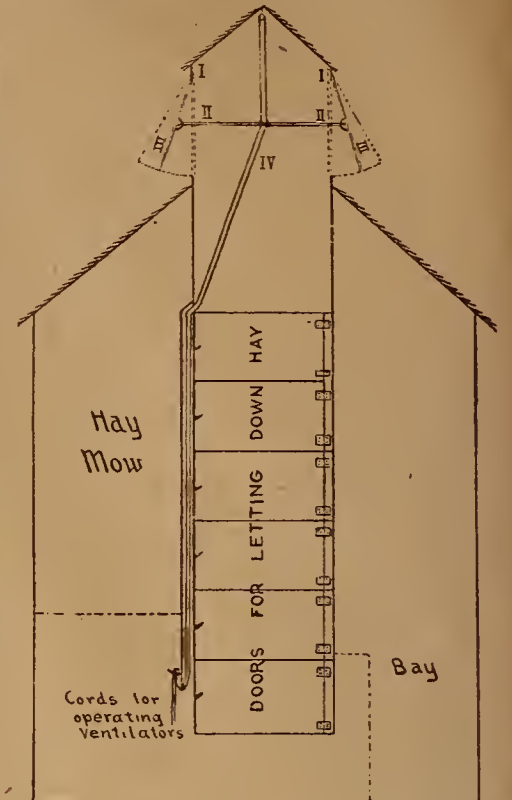
Dairying in cold weather is at best a delicate operation, but when a cow shivers in her stall she is not profitable to her owner.

Too warm a stable is not desirable any more than one too tight. Many dairymen, in their zeal to make the stable warm, get it too close. In this case, if the drains happen to clog, the air becomes humid and foul and the cows unhealthy; and unhealthy cows give unwholesome milk.

It is of the utmost importance to have the stables in winter in a highly sanitary condition. Expensive buildings are not required; rather warmth and good ventilation are. To-day building-paper is cheap, and as it will keep out cold better than matched siding no one should hesitate to use it. It will make a great difference in the temperature of any stable.

Ventilation in most cases should be provided by air-shafts to carry off the foul air. Feed-chutes are often employed for this purpose, but rarely are they of any advantage

because they are only outlets for the foul air into the feed storage. The object is to get the foul air out and the fresh air in without injury to stock or fodder. To accomplish this I know of nothing better than the arrangement described in the accompanying illustration.



The cupola pictured is erected in the center of the barn, on the ridge of the roof. It has four sides, with two of them open—one to the north, the other to the south. It should have a substantial post at each corner, as indicated by the dotted lines. The north and south sides are each fitted with a door made quite light but strong. Doors of wood or sheet-iron, with a heavy bar down the middle to strengthen them, are the cheapest. These are suspended from the top (I) with easy-working strap hinges. The light rod (II) extending across from the center of the doors is of wood and fastened to each with a strap hinge or by having its ends pass between two cleats with a bolt or pin through them, as shown at (III). This cross-rod is just long enough to hold the doors in a calm out at an angle of thirty degrees. When the wind blows from either north or south the door on the windward side will be closed and the other forced out to the extent of the dotted lines, and this will result in a strong upward draft in the ventilating-shaft.

In case one wishes to close the doors, as he generally will in summer, it can easily be done by having the crosspiece in two parts and joined in the middle (IV), with a strap hinge on the lower side, and a cord extending from one of them up over the pulley in the peak of the cupola and another down, both of which are within easy reach in the stable, as shown. The ventilator can thus be thrown out or into gear at will, for by pulling that cord which plays over the pulley the cross-rod will be raised and the doors drawn shut, while if the contrary is desired, a pull on the other cord brings it back into position.

By having the ventilating-shaft come down into the stable where it can discharge fodder conveniently onto the feeding-floor the dairyman can utilize it for a hay-chute by constructing doors in its sides. To open one of these doors and fork down fodder will interrupt ventilation only for the time being.

If this device is in gear the least breeze will, by playing around the cupola, produce a strong upward draft in the ventilating-shaft, and so take all the foul air out of the stable; and if this is done pure air will find its way in. No stable was ever tight enough to prevent pure air from getting in if space was made for it by taking the foul air out. In order to eliminate danger of draft, however, it is expedient to have iron pipes around the outside of the stable, and fitted with an elbow, so that the air may come in from the outside some three feet from the ground and enter the stable near the top. Such is a simple but scientific way of obtaining perfect ventilation in a dairy-stable.

FRED O. SIBLEY.

A Philadelphia seedsman, in a recent address before the Florists' club of that city, observed that, when he first heard of a farmers' institute, he concluded that it was an establishment for the care of aged and infirm farmers! When, however, he attended a few of these institutes he came to the conclusion that they might better be described as agricultural revival meetings, for they stirred up the listeners, and caused them to relate their experiences and successes—their failures, too—just as a great preacher stirs congregations.—Rural New-Yorker.

NOTES FROM GARDEN AND FIELD

BUYING SEEDS.—The question of buying seeds is always a live one with me. There is no time of the year when I am not liable to find myself without some kind of seed that I need at once for planting. Living near a large city, and having to pass the stores of several large seed-dealers, or near them, almost every week, I have a comparatively easy task in keeping in supply. In fact, I might buy seeds on the same plan that I buy groceries; namely, get just what I need for the time being, without looking much ahead and considering future needs. For instance, this week I used the last seed out of a package of forcing-lettuce; so when I go to Buffalo again I will call into the seed-store and get a new supply.

But this will not do in all cases, even with me, while by far the larger number of farmers and gardeners all over the land have no chance to ever step into a seed-store from January first until December thirty-first. Almost every interested seed-user also has his favorite strains or varieties of vegetables, and also his favorite seedsmen or seedsmen whom he expects to supply those particular seeds in full freshness and purity. Consequently, the bulk of this trade will have to be done by means of mail and express. Of course, we do not want to write a letter and make a remittance every time we want a five or ten cent package of seeds. We must try to make things as easy as possible for the seedsmen, too, for they are terribly rushed with orders at certain seasons. The best way is to make a very careful estimate of what seeds we shall need during spring and summer, and then send in a full order as early as possible. It is better to have a few seeds left over than to be short at a time when you may want them very much. There are very few kinds of seeds that are not just as good the second year as they were the first.

Most people have their notions, prejudices and well-settled likes or dislikes. We buy of one groceryman or dry-goods merchant in preference to any other, although the other may offer exactly the same goods at exactly the same price. So it is with people when they wish to buy seeds. Almost every seed-buyer has his favorite seedsmen. It is largely a matter of individual confidence, possibly more or less prejudice, and a good deal of habit. The plain fact, fortunately for the seed-buyer, is that our larger seed-houses who are in the business to stay, and advertise their wares year after year from the old stand, use their best endeavors to furnish to their customers as good, as fresh and as pure seeds as can be secured in the world, and that their prices are on a schedule which seems to be well settled or agreed on by the trade before the catalogues are printed. The variations in prices between different seed-houses are slight. We can buy of one about as cheap as of another, and prices of seeds, even in smallest packages, have gone down during the past few years like everything else has. I like to buy staple seeds, such as radish, cabbage, etc., in larger quantities, up to a full two-years' supply at a time, because that is the cheapest way to buy. But we should understand that the expenses of the seed trade are large, and the retail prices must be such as to leave a good margin of profit, in order to make the business a safe one for the seedsmen.

Considered from this standpoint I will confess that I may have been too severe on some of the people who are trying to sell ginseng seeds and roots. When we expect them to go to the expense of inserting an advertisement in the leading agricultural papers just for the sake of finding customers for scattering mostly small trial lots they must get a fair price for their wares in order to come out whole. And, by the way, one grower writes me that the ginseng-seed he offered at seventy-five cents a quarter ounce is clean seed, while the seed offered by another has the pulp on, and that it takes three ounces of such seed to make one ounce of clean seed. It also shows that it is a good plan to have one's eyes open all the time, and keep well posted on sources of supply, prices, etc., in order to buy to the best advantage.

THE SEED CATALOGUES.—The seed catalogues usually begin to come in about New-years; but I have never had one come to hand too soon. My usual complaint is that I do not receive them early enough. Years

ago I never gave much serious attention to gardening matters during the early part of winter. Woodchuck-like, I retired into warm winter quarters with energies more or less dormant, and began to think of garden-making only when the sun got warm enough to melt the snow in March. Now I have learned the lesson that in order to be most successful in gardening, for either pleasure or profit (but especially for the latter), I must get an early start, and this even where I do not grow winter crops in forcing-houses. I find that I have a better chance to raise fine, large onions, of the Spanish type, on the new plan when I sow seed early in January (on the greenhouse bench, of course) than when I wait much longer. And I also start tomato-plants for early crop in January and February of each year, rather than in March or even April, as I used to do. Besides, if we wish to make comparative trials of the different kinds of tomatoes offered by the different seedsmen as the "very earliest of all" we must sow seed of all at exactly the same time—and in order to do that we must have these different seed lots on hand. So it will be seen that it is necessary for us now to have the seed catalogues on hand very early—the beginning of January being none too soon. It takes time, too, to look all these different catalogues over and pick out what we want; besides, we may have to wait a week or more before we receive the seeds ordered from the distant seed-dealer. Be that as it may, however, the arrival of the new crop of catalogues is always hailed with delight by almost every member of the family. In my next I hope to be able to speak about the characteristic points of at least some of them.

SPINELESS GOOSEBERRIES.—Last summer while I harvested my big crop of Columbus gooseberries, frequently with hands bleeding and smarting from the pricks of the sharp spines, I often wished for a spineless gooseberry. Varieties without spines had then already been announced and introduced from France. I would surely have tried to get some of the plants had I not been told by those who first tried them that they were not just the thing for us. Professor Goff also tested them, and found that while the stems of these varieties are nearly spineless, the plants suffer so much from mildew that they have made very little growth. Spraying with potassium sulphide did not wholly prevent the mildew. Therefore, they give no promise of being valuable for our climate. And yet I must say that efforts toward finding or evolving a good spineless sort fit for our climate should not be given up.

DISEASE-INFECTED SEEDS.—Nobody will deny that the potato-scab is often transmitted from one crop to another by means of infected seed-potatoes. Practical experience and scientific investigation are agreed on that point. It seems also pretty well established that some of the green smuts are propagated and spread from spores carried over on the seed-grain. The need of disinfecting seed-potatoes (by soaking them in a one-mill solution of corrosive sublimate), and of subjecting seed-grains to a cleansing treatment (as, for instance, a copper sulphate wash), in order to protect the next crop from the ravages of disease (scab in one case, smut in the other), is now being generally recognized. But we are still very much in the dark in regard to the extent to which other, especially vegetable, seeds may be the means of transmitting fungous diseases from crop to crop and from year to year. I am convinced, however, that at least celery-seed is frequently infected with the spores of celery-blight, and when planted promiscuously is liable to produce the disease again in the seedlings. This is the only theory on which I can explain the appearance last spring of celery-blight in certain flats in the greenhouse and certain portions of the open beds (all from the same sample of seed) when other flats and beds remained perfectly healthy, at least until infected from the others. I have no doubt that a thorough wash with copper sulphate solution (say of one-per-cent strength) would kill the infection on celery-seed or similar seeds, and for this reason I shall hereafter sow no such seed except after it has been subjected to a cleansing treatment as suggested. I hope that many of my friends will try the same plan.

A CHEAP START IN NEW VARIETIES

An encouraging feature about my business—that of growing fruits and plants—is that the boys and men that work for me soon become very much interested in the business, and after they leave me many of them set up or attempt to set up the same kind of business

themselves. There is only now and then a man that I cannot get interested in the business. There is one young fellow that takes more interest than usual. He has been with me for many years, off and on, in the digging season, and has acquired many ideas in the strawberry business. Every year he buys a few plants of the new varieties and tests them. Thus his father's garden is a duplication of my strawberry-fields on a smaller scale.

This year he purchased a single plant of the Sample strawberry, paying fifty cents for it. I expected him to outreach himself in the attempt to propagate this plant, and he has. The plant was a rather small one, and was not set till late in May, and yet he has raised one hundred and five plants from that one parent plant this season. He has a different method from mine of increasing the growth. My practice is to cut off all the runners till the plant becomes large and stocky, and then allow them to run and spread. He allows the first four runners to grow, and then cuts the runners back from these and the original plant till all get large and stocky. Then he allows the plants to run, and layers the runners at intervals. His success is enough to give merit to the method. I was unable with larger plants set earlier to get as good results this season.

In applying fertilizer, he takes old rotted hog manure, digs a hole down next to the plant and buries it next to the roots. Water is applied at intervals. When he thinks that the strength of the manure is spent he removes it and places more in its place. His methods have very much interested me since I have seen the results, and it may serve as a hint to others who desire to increase their stock of new varieties rapidly.

L. J. FARMER.

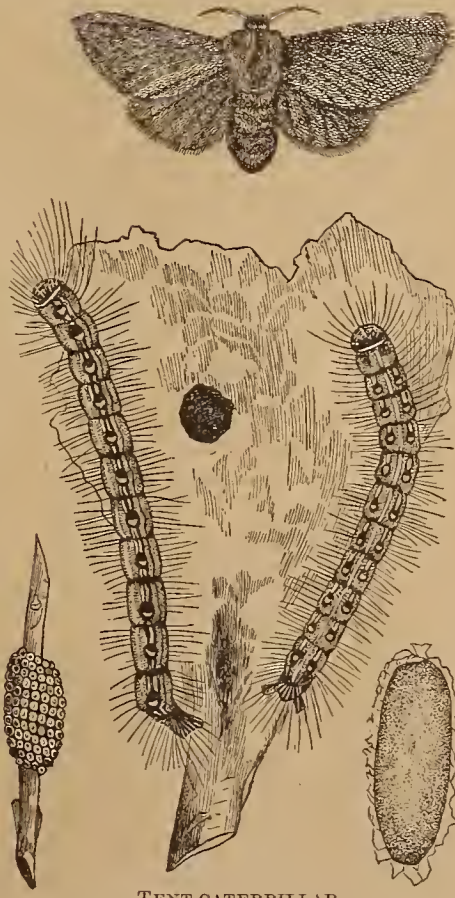
ORCHARD AND SMALL FRUITS

CONDUCTED BY SAMUEL B. GREEN

THE TENT-CATERPILLAR

But few orchard owners have failed to make the acquaintance of the tent-caterpillar. For over a century its tents, or webs, have adorned the wayside apple or cherry trees in all parts of the country. During the winter months the egg masses are readily discerned, and by destroying them the pest may be largely controlled.

The tent-caterpillar remains in the egg stage for an unusually long time, thus affording an excellent opportunity for its destruc-



TENT-CATERPILLAR

tion. The eggs are laid in clusters of about two hundred about the middle of July, being covered with a peculiar liquid which, upon drying, gives the mass a very hard, glossy finish. Not until the next spring do these eggs hatch. With the appearance of the young worms commences the destruction of the young leaves and buds. A few days later the larvae commence to spin their characteristic web, usually at the fork of a limb. For six weeks they continue to feed and grow, their appetites seemingly increasing with age, and seeking the shelter of their tent at night or during cold and wet-weather. The fully grown caterpillar is rather prettily marked with a white stripe along the middle of the back, numerous short longitudinal lines on either side of it, and with the sides spotted and streaked with blue. They

are about two inches long and quite hairy, as shown in the illustration.

As soon as fully grown, early in June, the caterpillars crawl down from the apple-tree, or whatever they are feeding upon, and seek shelter under boards, bark, fences, etc. In such situations they spin their yellow, silken cocoons, and inside of them transform to the chrysalis or pupa.

In two or three weeks the adult moths emerge from the cocoons, and are very common around city lights during July. They are rather pretty reddish-brown moths, with oblique stripes across the fore wings. But they live only to lay eggs for another brood, and die as soon as that is done. The eggs are usually found on apple-trees, but almost as often on wild cherry. The wild thorn-apple, or haw, tree also harbors many an egg mass, and should be carefully inspected for them.

A nearly allied species, the forest-tree tent-caterpillar, does considerable damage to the foliage of chestnut, hickory and other forest-trees.

The tents of these caterpillars are always the sign of the neglected orchard, as they may easily be removed by a broom or pole, and then burned with their contents. Burning them on the trees is liable to injure the young wood. A spray of Paris green, which will also be used for the codling-moth and other leaf-eating larvae, will be effectual against the tent-caterpillar. But it is a very easy matter to cut off the egg masses both while picking the fruit and in pruning, and this, with removing the few webs of those which escape, will usually be the best method to handle the pest. Wild-cherry, haw trees and neglected apple-trees should be watched, and destroyed if badly infested.

E. DWIGHT SANDERSON.

RECLAIMING OLD CURRANT-BUSHES

An acre of Virginia town property changed hands a few years ago. It had originally presented the appearance of an old-fashioned garden. Everything possible was crowded into it in the shape of trees, bushes and vines, and it was made to yield a great amount of fruit and truck. The house burned down and it was neglected for several years, when a friend of mine purchased it. As I was passing one day, he remarked over the fence that he guessed he would have to tear up a good-sized patch of currant-bushes, as the weeds and grass had run riot, and the bushes themselves looked as though they never had been pruned. I advised him, however, to cut them off even with the ground, and see what they would do. He did so, first burning off the ground and killing some weed-seeds, and then spading it up and covering it with a coat of manure and lime. In the spring strong, new shoots pushed up. He left five to each bush, and kept them well cultivated and sprinkled with hellebore as soon as any signs of worms appeared. They made a vigorous growth. The following year they were again well manured and cultivated, when they produced an excellent crop of fair-sized berries. The owner is well pleased with the result, and considers he has as thrifty bushes as though newly set out.

GUY E. MITCHELL.

INQUIRIES ANSWERED

Pear-blight.—W. A. G. Stillwell, Ga. Many experiments have been made in preventing pear-blight, and almost every imaginable scheme has been tried, including the use of fertilizers of different kinds, injections of fungicides into the tree, washes applied to the bark and different methods of cultivation; but there yet remains the fact that there is no known remedy for this ailment. We know that this disease is the result of a fungus plant working and feeding on the tissues of the branches, and in this respect is similar to rust in wheat, which often seriously injures the wheat-plant. The plant that produces the blight in apples and pears ripens minute spores, which grow on any moist surface and produce a sort of little root which may enter the plant wherever there is an opening in the bark. The most common place for them to enter is in wounds caused by pruning or by insects; in the stigmas of the flowers, where the tissues are very soft and open, and in the tips of the new growth, where the bark is very soft and open in structure. Remedies.—I find that there are some varieties that resist this disease much more than others, and some that blight to death very quickly. The Keiffer and Le Conte do not generally blight badly, although occasionally they are killed by it. Land that is very rich in stable manure or other organic matter seems to predispose fruit-trees to growing late in autumn and to blight, while an excess of potash in the soil, and not too much organic matter, or nitrogen, seems to favor early maturity of the wood and freedom from blight. Orchards located where they do not get a free circulation of air are much more liable to disease than those exposed to the wind so that the foliage dries off quickly. Spraying the trees with Bordeaux mixture, so as to keep the new growths covered with it, is a great protection against blight, and seems the most promising preventive at present. It should be applied about the time the flowers fall and be continued through the early summer, probably to about July 1st. This treatment would also prevent the scabbing of the fruit and rust on the foliage, and would probably prove a paying operation in this latter way alone in some locations. In a general way the best treatment is to cut off and burn the parts affected as soon as the injury is seen. In doing this it is important to cut several inches below where the disease may be but its injury not appear.

IMPROVEMENTS OF CEREALS—THE GARTON EXPERIMENT

THE recent announcement that the world's supply of fixed nitrogen will become exhausted, and that consequently the wheat crop will prove inadequate in less than thirty-five years, has attracted wide comment. It has been mentioned in opposition to this prophecy that probably the compounds of nitrogen procured to the soil by leguminous crops have been overlooked, and that the world's cultivable area, of which Canada alone can yet furnish half a million square miles, has been underestimated.

There are, however, other factors besides these that must affect the output of grain. And before Professor Crookes' prophecy is fulfilled, and it becomes necessary for us to resort to the synthetic food that a German professor declares can be made from next to nothing, we may come to rely for grain upon plants not at present listed among our cereals, but which scientists declare can, by careful methods of plant-breeding, be developed in less than twenty-five years. There are, however, yet possibilities of improvement in our present cereals; possibilities undreamed of during all the centuries of grain-growing.

Until the present century all improvements in the cereals had been brought about by mechanical means. Probably the earliest attempt at amelioration was the removal of light grains by the wind, only the heavy seeds being saved for planting. Next came selection of large grain by sifting out the small. Then was reached the highest type of mechanical selection which may embrace both the foregoing methods, if such they may be called, but which depends primarily upon the picking out of individual plants and heads from the general field, and the combined practice of selecting and growing only those that approximate a certain set standard. The process is comparatively simple, but the limitations of such selection and improvement are unfortunately narrow. There is yet a higher type of selection that embraces all the foregoing, but adds thereto the exceedingly delicate operation of cross-fertilization. This is the starting-point of the whole system.

The cereals, except corn, are peculiar in that the flower is not fertilized with pollen carried by either wind or insects, but by that produced in the individual flower. As a result the tendency to variation of varieties once fixed is small indeed, and results from, first, the cumulative effect of the conditions of growth; second, the occasional appearance of sports or reversions to ancestral types, and third, the extremely rare occurrence of fertilization by extraneous pollen. Yet it is the last-named variation that is the most hopeful in the amelioration of any species of plant; for if the pollen come from a different variety, or even from a plant of the same variety, but different in constitution, there is a blending of blood which results in the elimination of some characters and the accentuation of others. When this blend has taken place between different varieties, mechanical selection can do much to fix desirable and reduce undesirable characters, and thus establish a new variety.

In 1846 Messrs. Maund and Raynbird commenced a series of experiments in cross-fertilization which resulted in a number of varieties that attracted attention at the exposition of 1851, but which seem to have since been lost sight of. These are the first experiments of their kind. Owing to the delicacy of the operations, and the skill and patience involved in the after-selection of seedlings, nothing further was attempted in this line until 1880, when Messrs. John and Robert Garton commenced their experiments at Newton-le-Willows, England.

In order to discover the qualities of all varieties they searched the cereal world for those not grown in England, and at one time had 350 wheats, 70 barleys and nearly 100 varieties of oats growing side by side at their great trial grounds in Lancashire. Then with a clear idea of the needs of the market, obtained from an extensive knowledge of the grain trade (their father was also a grain merchant), they culled out the sorts of least apparent merit and commenced to cross varieties possessing particularly good points. From three to six flowers in the head of a useful variety would be opened and the stamens removed before they had burst; then pollen from some other valuable kind would be applied to the pistil, and if the operation proved successful, which it might perhaps as often as not, the resulting grains (only one for each flower) would be saved and planted the following season. Nothing of note would appear the first year, the plants more or less closely resembling the parents. But the second season would produce a number of new forms upon which

the methods of mechanical selection already noticed would be brought to bear. After a series of several years the type would become reasonably well fixed, and operations would be commenced to increase the stock.

As a result of these eighteen years of self-imposed labor the Gartons have produced improved varieties that merit all their faith, patience and anxiety. They now have wheats that are thirty and forty per cent heavier than varieties in general cultivation, sixty per cent more prolific, and possess a straw of such strength that it will withstand storms which readily lodge any of our present varieties. Improvements in barley and oats are no less striking. Six-rowed barleys twenty per cent heavier than common sorts, and equal to the best two-rowed malting varieties, have been produced. And hull-less oats that are ready to be prepared for the table as soon as threshed have also been developed. A peculiarity of these oats, moreover, is that they shell even less than varieties more protected.

It is little wonder that these experiments should attract scientists from the departments of agriculture throughout the world. Our own department at Washington, always alive to the interests of American agriculture, lately sent a specialist to visit the Garton brothers. This gentleman was so much impressed by the magnitude of the improvements that he endeavored, in behalf of the United States, to buy the entire stock. The experimenters, however, declined his offer because they wish the British farmers to reap the benefits of their discoveries.

Such in brief are the methods employed and the results attained in the Garton experiments. Their effect upon agriculture remains to be seen, but it seems safe to predict that they will be far-reaching, though, owing to the doubting nature of the average farmer, their progress will probably be slow. They will, however, likely exert some influence in postponing the failure of the world's supply of wheat in 1931.

M. G. KAINS.

EXTRACTS FROM CORRESPONDENCE

FROM VIRGINIA.—I came here from Illinois ten years ago. There has been a great deal of improvement here since then. Wire fences have taken the place of brush, and good houses and barns are being erected on all sides. We have a number of immigrants from Pennsylvania, Illinois and Canada. Good, industrious farmers are always welcome. We have plenty of cheap land at from \$5 to \$15 an acre. We always raise enough and to spare. We can plow almost any time in winter. There are no cyclones, mosquitoes nor chintz-bugs here. Wheat looks well. Everything is prosperous.

B. B. S.

Midland, Va.

FROM MISSOURI.—Henry county is about eighty miles southeast from Kansas City. It has several railroads and is one of the best counties in the state. Our crops are good. We raise wheat, corn, oats, flax, broom-corn, sugar-cane, and all kinds of grass. It is a stock-raising country. Our lands are new, selling at the low price of \$25 to \$30 an acre. Our markets are good. This town of Urich is quite a business center. It is only about twelve years old. It now has five churches, four general stores, four hardware-stores, two harness-shops, with other smaller places of business, and one good bank. It has one thousand inhabitants.

J. B. R.

Urich, Mo.

FROM TEXAS.—We have a farm of two hundred acres, well stocked with good cattle and horses, just seven miles northwest of Fort Worth, the great railroad center of the Lone Star state. We had a snow December 8th from one inch to four feet in drift, and sleigh-riding was the pastime of the day. Snow is usually bluffed off by flowers and sunshine. We have a fine country here, both for farming and stock-raising. Tarrant county is about equally divided between timber and prairie, and is abundantly watered—some artesian-wells, springs, Trinity river, and considerable running water in barrels on wagons. Wolf-chasing catches our boys from eight to sixty years old.

Fort Worth, Texas.

C. B. L.

FROM MISSOURI.—The soil is a black, gravelly clay, with red clay subsoil. We have an abundance of pure spring and well water, and fine oak, hickory, walnut and other hard-wood timber. There is good range for all kinds of stock. blue-stem grass growing among the open timber. There are thousands of acres of government and non-resident land for sale and for homesteads. A person with \$300, \$500 or \$1,000 can get a good home, in a healthful location, adapted to fruit, vegetables, corn, wheat, oats, cane, Kafir-corn, timothy, clover, blue-grass, rye—in fact, any thing you plant. The land that can be bought for these prices is thirty miles northwest from Lebanon, the nearest railroad point, and has very little or no improvement on it. Generally there are eighty, one hundred and twenty, one hundred and sixty and two hundred acres in the tract.

Mack's Creek, Mo.

J. F.

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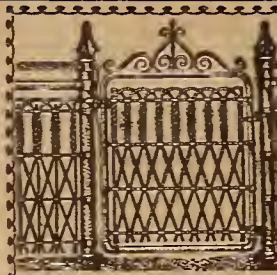
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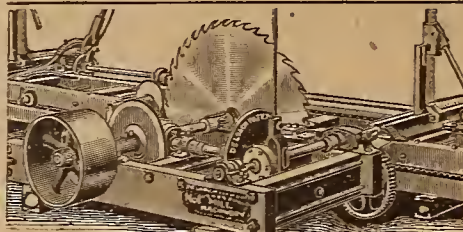
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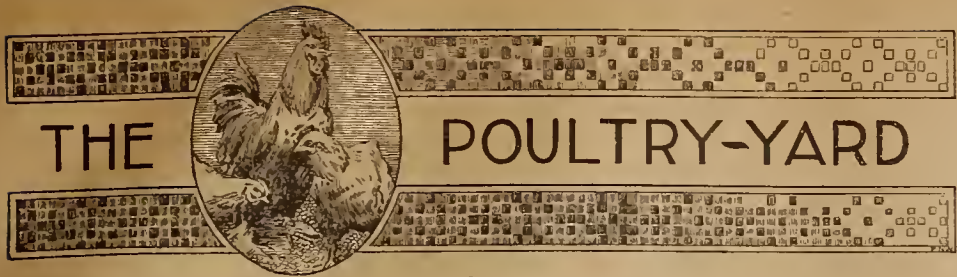
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HATCHING WITH INCUBATORS

THERE are so many causes for chicks dying in the shells that it is impossible to state them. The eggs may be at fault, and the hens that laid the eggs may be too fat. Then there is the thermometer, which may be incorrect, and you may also be mistaken in the temperature. Eggs should never be added to the lot after incubation begins; the difficulty of adding extra eggs every week is that the animal heat of the first lot will be greater than that of the second. After the tenth day the chicks in the eggs may of themselves create sufficient heat to keep a temperature at 103 degrees for a day, without any heat being given to them, while the eggs just put in would not be as warm. For instance, if the bulb of the thermometer, placed on an egg that has been in the incubator a week or ten days, records 103 degrees, fresh eggs would perhaps be only at a temperature of 90 degrees. Cooling the eggs by hens depends upon circumstances. If the eggs are all fertile there will be much animal heat in the eggs, and the hen comes off because the heat is too high for her. If but few chicks are in the eggs she sticks closely to the nest because the heat is not above her own temperature, she only coming off when compelled by hunger or some other cause. Incubator manufacturers do not always consider this fact, and because the hen comes off the nest the manufacturers teach "cool the eggs." The fact is that the eggs need no cooling unless the heat is too great. Everything depends upon the warmth of the nest and the fertility of the eggs. The hen does not seek damp ground for her nest. She seeks a cool place in summer and a warm place in winter, even hatching out full broods on the top of a haymow or in some place as dry as a dust heap. A nest full of fertile eggs will drive the hen off, and an incubator of fertile eggs will often run up suddenly in heat. Both the hen and the incubator work alike. The heat of an incubator should not go over 103 degrees. If it is over 103 degrees under a hen the same results will occur. The heat will always fall if the chicks are taken out of the incubator too soon, as the animal heat is great during the last week. The chicks should remain in until the hatch is over—or according to the kind of incubator. If an incubator has nearly all fertile eggs the heat should be carefully guarded or it will rise the last week, from the animal heat of the chicks. If the season be warm the chicks will hatch themselves without deriving heat from any source. If the heat falls the chicks remaining will hatch out very slowly, if at all. After an incubator begins to hatch keep away from it. It is the most difficult matter known to prevent novices from opening the drawer.

COCHIN FOWLS

The Cochin is an excellent breed for roasters. They produce the greater number of their eggs in the winter months, from November to May, and lay through the summer. The broilers should be killed at nine to eleven weeks old, and for roasters at four to five months. They are good layers if not made too fat. Their eggs are large, rich, and dark in color. They grow fast and soon get into market. The Cochin is a fairly good table-fowl. A flock of them, rich, clear, buff in color, on the lawn makes a beautiful appearance. Being heavily feathered renders them suitable for a cold climate. They are good sitters and breeders. They are not high flyers, stand confinement well, and can be kept in a coop three feet high, thus making them an excellent breed for small yards.

CHICKS AND MANAGEMENT

The heat in a brooder should not be less than 95 degrees for very small chicks. Rolled oats should not continue as a food but for a week, though they are frequently recommended. The chicks should be fed only as much as they can eat up clean, allowing no food to remain over, as it is better to feed them three times a day, letting them go hungry between the meals, than to give too much at one time. The difficulty in using sawdust on the floor is that both fowls and chicks will eat it, and it is injurious. Bran on the floor is better. The brooder should always be warm. A cake made of three

parts corn-meal, one part middlings and one of ground meat, cooked, is excellent for chicks after they are a week old, and may be given to them three times a day. It very often happens that chickens, when they are in what is known as the "ragged" state, begin to show signs of drooping, especially at the time when the feathers are growing on the heads. At such a stage, unless proper attention is given to them, the death roll will be materially increased. Change of diet, plenty of exercise, and shelter from variations of the weather must all be taken into account. A little sulphur given in the morning meal will be found beneficial, and a most useful change of food will be found in the millet-seed or hemp-seed, either or both of which may be given in moderate quantities. If kept in brooders, see that the chicks have access to plenty of green food, particularly cabbage, which is a most desirable change, and also scalded clover-hay leaves.

VALUE OF EGGS IN HATCHING

To use a dozen eggs from which only six chicks come, and then lose three of them, means an expenditure of four eggs for one chick, and no one can afford the cost in that respect. The heaviest loss with chicks is with hens, not with incubators and brooders, and this fact should not be overlooked. It is admitted that in the spring and summer, when the hen has everything in her favor, she will be more serviceable than the brooder, but in the winter, when the cold winds, ice, snow and rains prevail, the hen has a difficult undertaking to care for herself instead of attempting to raise a brood, and as a rule the hens are fortunate enough if they raise one half of the chicks hatched. When a hen becomes broody in winter, make her nest in a warm place, and when she brings off her brood have a place prepared for her, under shelter and where sunlight can come. Be careful that the chicks are not exposed or become chilled, and aim to raise every one of them. In that case the chicks will pay, because the expense of the eggs will be reduced by reason of the larger number of chicks marketed.

WINTER FEEDING

Do not feed hens in the morning with a full meal from the trough. The warm mess in winter is a good plan, especially in the morning early, and enough food should be allowed, only that one half of the food should be given in the trough and the other half as whole grain scattered in some kind of litter. The hens should never be fed so as to permit them to loaf around, but must be hungry enough to scratch for more. The first food may be varied every other day and consist of a pound of lean meat, chopped fine, for twenty hens. About an hour or more before night scatter grain for the hens to pick up. Give enough, but make them scratch for it. If too much feed is given, and no work on the part of the hens, they will become too fat to lay many eggs.

COLOR AND BREEDS

Many readers who take an interest in the breeds are at a loss to understand the advantages possessed by birds of the same breed, but which are different in color. For instance, there are the White, Buff, Black, Brown, Dominique and Silver-Duckwing Leghorns, but they differ only in color, being equal in laying qualities. The same may be stated of the single-comb and rose-comb varieties. There is a difference, however, in hardiness. The varieties that are rare, such as the Black, Dominique and Silver-Duckwing Leghorns, are more inbred, as new blood is not easily obtained, but the Buffs, Whites and Browns, though harder than the others, are about equal in merit otherwise. Color has but little, if any, influence in determining quality.

CORN-MEAL DOUGH

Corn-meal dough is the standard food for chicks, and probably it will be used for many years to come, as it is wholesome and excellent, but the apparent good results from its use is during spring and summer, when the chicks can pick up other foods which balance the corn-meal. In winter the chicks should

have one feed of bone-meal and chopped meat, and a small quantity of linseed-meal should be added to the corn-meal once a day. Another point is not to have the corn-meal dough too sloppy, as too much water should not be used. Only sufficient water or milk should be added to have the dough dry to crumble.

EXTRACTS FROM CORRESPONDENCE

A LARGE PROFIT FROM TURKEYS.—This year I made an attempt to raise turkeys. I had only a pair, and my hen laid thirty-nine eggs. I set fifteen extra eggs, putting them all under hens. I hatched altogether forty-seven turkeys. Out of my first lot of thirty-three turkeys I raised twenty. Two the skunks got when about four weeks old, two died when about a week old, and the others when past their sixth week. Later I hatched fourteen, but only raised four of them—as I did not take as good care of them as I did of the first. I fed them about every two hours. Some I fed curd, and bread soaked either in water or buttermilk, with onions and onion-tops chopped up, and middlings wet with buttermilk—all they wanted to eat. I do not believe in starving them, as some say. None of the turkeys were out of doors until past their second week, and they were never wet until October. I sold twenty of them Thanksgiving week. They ranged from five pounds up to fifteen and one half pounds, dressed, and I got fourteen cents a pound for them, bringing me twenty-four dollars and fifteen cents (\$24.15). I paid fifty cents to have them killed, and one dollar to get help to have them picked. That was a clear profit of twenty-two dollars and sixty-five cents (\$22.65), as my chickens fed the turkeys, old and young, besides themselves. I made a clear profit of thirty dollars and seventy-two cents (\$30.72) on them from April up to Thanksgiving—in fact, up to the present date—so you see I made a profit on my poultry of fifty-three dollars and thirty-seven cents (\$53.37), besides all the eggs and fowls we ate, as I did not count them in. I have at present about sixty-five hens. Next year I shall raise some young chicks, also. I always fed my turkeys twice a day, and did not feed them anything much but middlings until about a month before killing-time, when I gave them boiled potatoes and corn-meal, warm, for their breakfast, and corn for their supper. They were lovely and fat, and just as yellow as gold. I am going to try my luck another year with three turkey-hens, but do not know whether to keep an old gobbler or a young one. If any one is more experienced than I on that score I would be thankful for information. M.

Washingtonville, N. Y.
[Keep a gobbler that is two years old in preference to a yearling.—Ed.]

A WARM POULTRY-HOUSE.—A great deal of the success with poultry in the winter-time depends on the way the houses are built for warmth. But when we speak of warm poultry-houses we do not mean it in the same sense that we do in speaking of a dwelling-house being warm. To have a poultry-house warm enough so that water will not freeze in the coldest weather is a warm poultry-house, and is warm enough. If the temperature does get down a few degrees lower than the freezing-point but little damage can come from it, even if the fowls are of the large-comb variety, for they are not damaged much by such temperature. Fowls can safely run out when the thermometer is ten degrees above zero, and still be comfortable. Due consideration should be given to the fact that the fowl when on the roost is not active, and that it will have to have a higher temperature than when it is scratching around outside. Animals are not so susceptible to changes in temperature as man, for we know that turkeys, ducks and geese seem to enjoy running through the snow when the weather is quite cold, and one is liable to conclude that they are comfortable in all kinds of weather. The object in having a warm house is to induce the hen to lay eggs during the cold months. Orrville, Ohio. I. G.

INQUIRIES ANSWERED

Breeds and Fences.—M. E., Keyser, W. Va., writes: "Which breeds are suitable for a yard in a town, the fences being of ordinary height?"

REPLY:—The Brahmas and Cochins cannot fly over a fence four feet high, and should answer the purpose.

Number of Eggs.—S. T. H., Elkhart, Ind., writes: "What is the number of eggs a flock of a dozen hens should lay in one year?"

REPLY:—If ten dozens eggs are secured as an average for each hen in a large flock it will be a fair proportion.

Promoting Egg-laying.—L. R. R., Cleveland, Tenn., writes: "Is there any particular food that will make hens lay in winter?"

REPLY:—Lean meat, or lean meat and cut bone, is the best food, but the food should be of a variety. The most important point in securing eggs in winter is a warm poultry-house.

Temperature in Brooders.—W. B. H., Omaha, Neb., writes: "What is the proper temperature for a brooder and a brooder-house?"

REPLY:—Very young chicks should have warmth at 95 degrees under a brooder, and the brooder-house should be kept at 70 degrees. After the first week the brooder may be maintained at 90 degrees.

Fat Hens.—L. S. G., Oswego, N. Y., writes: "According to my understanding of articles in the FARM AND FIRESIDE my hens are too fat; how can I reduce them in condition?"

REPLY:—The best method is to give no food in the morning for two weeks, with a light meal at night, thus allowing only one meal each day. Scatter a gill of millet-seed for twenty-five hens in litter, and compel them to scratch and exercise.

WINTER EGGS

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QUERIES

READ THIS NOTICE

Questions from regular subscribers of FARM AND FIRESIDE relating to matters of general interest will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should inclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two WEEKS before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Whitewash.—J. S., Tacoma, Wash. Take good, fresh-burned lime, one half bushel; slake it with hot rain-water, keeping it covered closely during the process. Add to this one peck of salt dissolved in soft water, then add five gallons more of hot water, and stir the mixture well. Cover it up and let it stand a few days. Add sufficient bluing to give the tint desired, and apply hot. The secret of making whitewash stick well is to have good lime, properly slaked, well mixed with salt, and applied hot. In place of the salt a half pound of glue, previously dissolved in warm water, may be used.

Clover Not Catching.—J. B. R., Hartford, Mich., writes: "I have been very unfortunate for the last five or six years in obtaining a clover crop from seeding with oats and rye, both on clay and sandy soil. I have sometimes dragged the seed in, and also sown in early spring on rye without harrowing. If you can give me any good advice on seeding I should like it very much. Is there any substitute for clover for southwestern Michigan?"

REPLY:—Failure may be due to any one of several causes. The clover may have been smothered by the oats or rye, or may have perished for lack of moisture when these crops were ripening, or the soil may be too acid, etc. In cases of acid soil the remedy is an application of lime. Sow the clover on fall-sown grain, or sow it alone on land prepared as for oats, and experiment with lime.

VETERINARY

CONDUCTED BY DR. H. J. DETMERS

To regular subscribers of the FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two WEEKS before the date of the issue in which the answer is expected. Veterinary queries should be sent directly to Dr. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered.

So-called Lampass.—W. N. W., Vancouver, Wash. Please consult FARM AND FIRESIDE of December 15th.

Garget.—G. W. C., Burlington, Iowa. What you describe is a mild attack of garget. Milk oftener, and see to it that all the milk is milked out at each milking.

Cows Sick and Dying.—J. B. W., Reddick, Ill. No wonder that your cows get sick and die if you feed them with rotten corn full of fungi. Change the diet, and feed sound and healthy food.

A Deaf Pup.—V. A. P., Nashville, N. C. Upon the bare statement that your pup appears to be perfectly deaf I cannot base any opinion as to the cause. May be that the pup was born deaf and never could hear. The only advice I can give is to get another pup, one that can hear.

So-called Big-head.—A. T., Kimball, Neb. The prospect of "curing" a case of so-called big-head of already three years' standing is a very slim one. If you desire to do something you may rub in once a day, or once every other day, a little mercurial ointment, as much as a small pea at a time, but the rubbing in must be a thorough one.

Probably a Case of Foot-mange.—J. M. Z., Belle Vernon, Pa. What you describe appears to be a case of foot-mange. First wash the feet and legs of your mare with soap and warm water, and this done, give them a good wash with a five-per-cent solution of creolin in water. At the same time clean and scrub the stall occupied by her in a thorough manner—if possible, with boiling hot water—so as to prevent any reinfection. Repeat this treatment two or three times once every five days.

Pigs Dying.—J. A. P., Russell, Iowa. Coughing is a symptom observed in nearly all affections of the respiratory organs, and therefore not characteristic of any particular disease. In swine it is a very frequent symptom in swine-plague, because in that disease the lungs are a favorite seat of the morbid process; but in swine it is also the most conspicuous symptoms in the lung-worm disease. If you had made a post-mortem examination and carefully noted the morbid changes presenting themselves the diagnosis would have been easy.

Legs Swelling.—H. P., Irvin, Mo. The swelling of your horse's legs (like sticks, as you say) is probably caused by weakness and a too watery condition of the blood. I have no doubt that you are right in supposing that his digestion is weak, but if it is, ten good ears of corn three times a day is too much and will effect no improvement. See to it that the horse is at least once a day well groomed, that particularly his legs get every day a good rubbing, allow him all the voluntary exercise he can be induced to take, change the diet, feed some good oats and some good hay, and much less corn, and then, unless the horse is already too old or too low down, you will see some improvement.

So-called Ringworm.—R. C. L., Flushington, Mich. What you describe appears to be a case of so-called ringworm. Paint all the affected places once a day with a tincture of iodine for several days in succession, but at the same time clean the stall in a thorough manner so as to prevent a reinfection; also disinfect the grooming utensils with soap and hot water.

A Cutaneous Eruption.—D. A. S., Ontario, Ohio. The exact nature of the cutaneous eruption on the hind knee and beneath the lower jaw of your cow cannot be made out from your description, but you will probably succeed in effecting a cure if you will make twice a day a liberal application of a mixture of liquid subacetate of lead, one part, and olive-oil, three parts, to the sore surfaces.

Bog-spavin.—H. C. D., Lycoming, N. Y. A so-called bog-spavin is not easily removed, and if successfully removed it usually returns on the least provocation; therefore, as it seldom causes any lameness, it is usually best to leave it alone. It will never do to open a bog-spavin, because doing so would be opening the joint, and to withdraw the superfluous synovia by means of an aspirator will do no good, even if the strictest aseptic precautions are used, because the withdrawn fluid will soon be reproduced. Persistent applications of iodine preparations, especially of tincture of iodine, or of iodine dissolved in cod-liver oil, will sometimes effect a reduction, but this reduction as a rule is only a temporary one. So it is with the use of bandages, or, as you call it, of a truss; besides that, it is difficult to keep them in position.

Vitiated Appetite.—J. D. C., Constantia Centre, N. Y. The vitiated appetite of your calf for rotten wood and "all the stuff it can get" is the result of a severe derangement of the whole animal system, caused by an unsuitable diet, or by food lacking very essential elements needed for the development and support of the animal organism. In most cases these lacking elements are the phosphates, lime-salts in general and nitrogenous compounds. Hence, the only rational remedy consists in a change of diet and in providing food that contains the required elements in sufficient quantities. But as with such an animal the satisfying of such a vitiated appetite has often become a habit which is not so very easily broken, a change of diet alone may be insufficient, and therefore it is often advisable to make once a day, for three days in succession, a subcutaneous injection of one and one half grains (.1 gram) of apomorphine. These injections, however, will do no permanent good unless at the same time a thorough change of diet is made.

A Swelled Leg.—M. C. F., Garrett, Ky. It is very well possible that the median metacarpal, or splint, bone was fractured when your colt was hit with a rock last March, and then the necessarily following exudation would produce a callus resembling a so-called splint. This callus, however, if it had been left alone, would have gradually become firmer and more solid by the process of contraction that would have set in, and thus would have decreased in size; or if immediately judiciously applied bandages had been used the callus would never have become very conspicuous. But as it was several kinds of probably sharp liniments were used, which necessarily kept up the inflammation and exudation, and thus caused more and more swelling, and probably also the blisters you mention. If you stop the use of liniments and apply twice a day a bandage of woolen flannel (woolen because elastic) in such a way that it will have a gentle pressure upon the swelled parts, you may yet succeed in considerably reducing the swelling, but will never be able to entirely remove it.

Possibly Actinomycosis.—C. T., Pasadena, Fla. What you describe may possibly be a case of actinomycosis, and in that case the actinomycosis, very likely, found an entrance into the jaw-bone of your colt through the empty sockets of the "bad" teeth which were extracted. It is, however, also possible that the jaw-bone was severely damaged, and maybe more or less broken, when the teeth were pulled. Have the sockets carefully examined, and their condition may reveal the true condition of the jaw-bone. If it is actinomycosis, and the jaw-bone is already honeycombed with suppurating canals, the case must be considered a hopeless one. If, on the other hand, loose pieces of bone are found in the sockets of the removed teeth, keeping up the irritation, inflammation and swelling, a removal of these pieces and a bringing of the exposed surfaces of bone to an exfoliation, perhaps by carefully applying to them a little strong carbolic acid—say by means of a tuft of cotton tied to a stick—may yet lead to at least a partial recovery. If a good veterinarian is available, let him examine the colt and direct the treatment.

Foul Sheath—Thrush.—L. V. S., Peachland, Cal. First clean the affected parts in a gentle but thorough manner with warm water and soap, and then apply to all the sore or excoriated spots a mixture of liquid subacetate of lead, one part, and olive-oil, three parts, or else apply (dust on) to all the sore spots or surfaces a powder composed of equal parts by weight of tannic acid and iodoform. Repeat this treatment as often as necessary until a permanent healing has been effected. This will not take very long, unless it be that the horse is in the habit of urinating in the sheath, in which case it may become necessary to split the sheath. The diet of the horse has nothing to do with the case.—Concerning the case of thrush, first cut away, with a sharp hoof-knife, all the loose and decayed or decaying horn, then, while holding up the foot of the horse in such a way that the toe is considerably lower than the quarters, and the sole forming an angle of about thirty degrees with a horizontal line, pour some pure carbolic acid into all the clefts and crevices of frog and sole, but be careful not to bring any of it in con-

tact with the skin, and let all the superfluous acid run off at the toe, and at the toe only. This done, keep the horse on a dry and clean floor. In most cases one application will be sufficient. If not, a second one may be made a few days later.

A Collar Fibroid.—W. M. F., Myrtle Creek, Oreg. Such a callus (fibroid) caused by often repeated undue pressure or bruising by an ill-fitting collar can be removed only in two different ways; namely, by a surgical operation (excision), and by a judicious use of caustics. Which method is to be preferred depends upon circumstances, such as the size, limits, condition and location of the fibroid. But whatever is done, unless every particle of the fibroid is removed or destroyed, and unless the scar invariably left behind is not too large, no real improvement is effected. If the fibroid tumor is situated immediately beneath the skin and is not too large, a good way to remove it is the following: Make with a sharp knife, as low down as possible, a perpendicular cut, not more than three quarters of an inch wide, into the center of the tumor, or a trifle beyond, and then insert into this cut a crystal of sulphate of copper, push it as far as possible into the center of the fibroid tumor, and leave it there. If the latter is of medium size (say as large as a hen's egg), a crystal about three quarters of an inch long and about one half inch thick will answer. If the operation has been well performed nothing more is necessary than to wash off the discharges once a day and to give the animal rest. After a healing has been effected work the horse either with a breast-collar, or have a collar specially prepared that does not press upon the yet tender parts. Read the advice given to W. V., Jacksonville, Pa., in this issue.

A Collar-gall.—W. V., Jacksonville, Pa. A successful treatment of such a collar-gall as you describe requires a surgical operation, to be performed by a veterinarian. The extent of this operation, of course, depends upon the condition and the contents of the gall. If the gall is not of long standing, and its contents yet fluid, it is usually sufficient to make two openings, one above and the other at the very lowest point, and then to pass a seton through; but as even this comparatively simple operation requires some skill and good judgment, and as the seton must neither be removed too soon nor be left in too long, I advise you to have the operation, under all circumstances, performed by a veterinarian. If the lower opening is not made at the very place where it ought to be, or if the seton is removed too early or too late, or any other mistake is made, a permanent healing will not be effected. Further, unless you throw away your collar-pads and stop throwing all the pressure upon the very parts which should be relieved, a permanent cure will be an impossibility. I advise you to use a breast-collar when the horse is again able to work; at any rate as long as there is any abnormal sensitiveness in the affected parts, and thus to relieve the latter from any pressure whatever. Afterward to take your horse, which you say has uncommonly high withers, to the harness-maker and have a collar made to order that will fit and will not cause too much pressure upon parts that cannot bear it.

Copious Discharge—Periodical Ophthalmia.—N. J. F., Edelstein, Ill. As to the copious and sometimes fetid discharges from the vagina and probably uterus of your mare there are two possibilities. One is that the mare conceived when she was bred last June, and that the fetus died and decomposed, and is now, together with secretions of the uterine mucous membrane, coming off in the shape of the discharges you describe. The other is that the mare suffers, and possibly did suffer before she was bred, from a chronic catarrhal inflammation of the uterine mucous membranes. In either case it is advisable to irrigate the uterus of the animal once a day for several days in succession with a blood-warm one-per-cent solution of creolin in water (1 to 100). This is best done—better than with a large syringe—in the following way: Take a common wooden bucket, such a one as can be bought in any grocery-store, bore a hole about five sixteenths of an inch in diameter through the bottom, fit into this hole a piece of glass tube about four inches long and of the right thickness to make an air-tight fit; then take five or six feet of rubber tubing of sufficient diameter to fit tightly over the glass tube sticking out of the bottom of the bucket, close the rubber tubing at a convenient place beneath the bucket by means of a clothes-pin, or let an assistant compress it with thumb and finger, insert in a gentle way the loose end of the tubing into the uterus of the mare as far as you can without doubling it; then pour your irrigation fluid, already prepared and at hand, into the bucket, elevate the bucket as high above the animal as circumstances and the length of the rubber tubing will permit, and remove the pressure (clothes-pin or thumb and finger) from the rubber tubing. The fluid will then, by its own weight and in the most gentle and at the same time most effective manner, enter the uterus and thoroughly irrigate the same. You may use each time about a gallon of fluid.—The affections of the eyes appears to be, according to your description, a case of periodical ophthalmia ("moon-blindness"), an incurable disease which, as a rule, sooner or later terminates in blindness. If it is an object to preserve to a certain though limited extent the appearance of the diseased eyes by preventing a closing of the pupils, an atropin eye-water (one grain of atropin to one ounce of distilled water) may be used while an attack is on.

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OUR SUNDAY AFTERNOON

THINGS TO BE LEARNED

Four things a man must learn to do
If he would make his record true:
To think without confusion, clearly;
To love his fellow-men sincerely;
To act from honest motives purely;
To trust in God and heaven securely.
—Henry Van Dyke.

LIFE AND HEALTH

EVERY individual has either inherited or acquired a manner of living composed of habits, to which he or she gives very little thought. It is to these that I would direct your attention rather than to the grosser habits which have been the theme of moralist and preacher year in and year out. Examine your habits of eating, for instance. The process of taking food at regular intervals through the day has become a habit. The amount of food that you take is regulated more by habit than by judgment. The human animal has healthy instincts to begin with. To prove this, think of how many things one eats that the liking for has come only through persistent education of the palate. The taste for olives, limes, pickles, beer, and many other things which do not increase the bodily health, is only formed after a process of education. People get in the habit of eating much more than they need. The many and rich courses of a dinner lead them to do this. Others eat whatever is before them, not because of appetite, but because it is within reach; so with drinking. Many people take great quantities of bread with their meals in this absent-minded manner, and grow stouter than is good for them. So they continually drink water. The kind of food one prefers is much more largely a matter of habit than one realizes. I have known those who, through long use of an inferior kind of coffee at a boarding-house table, preferred that to any other. So in the matter of having food hot or cold. Certain wells and springs yield water impregnated with mineral waters. At first the taste is very disagreeable, but afterward the taste for it is acquired, and only that kind of water satisfies the thirst. Clothing is also a matter of habit. The kind, the thickness, the amount of clothing, depend for comfort largely on what one has become accustomed to. Space forbids my elaborating the subject as it might be along these lines, but you will be both interested and amused to examine your every-day habits and see what you have inherited and acquired in these directions, and the influence they have upon your life and health. Man, like the animals, has been born with healthy instincts, and those things which act against his well-being in eating, drinking, sleeping, clothing and living are the modes and customs which have been acquired through a persistent training and imitation.—Grace Peckham Murray, M.D., in Harper's Bazar.

SINS OF THE TONGUE

Many years ago, within this century, there dwelt in the same city with this deponent a certain woman. She was a member of the same denomination as that to which we belonged. She was always active in church work, was president of the missionary society and other organizations for the uplifting of the sinful and sorrowing ones who will always be with us. It came to pass, as the days rolled on, that with other friends she was invited to share our hospitality at some social function. She came, of course; for where did she not go where were to be gathered the true, the beautiful and the good? When she was ready to depart, with other guests, she remarked, "I have spent such a delightful evening, and now, my dear, I am going to have you come and spend an evening with me very soon." Time wore on, but the long-promised invitation did not reach us. Then a missionary from China chanced to be her guest for several days. There were receptions and receptions, and at one, where our friend was a guest, she came to me, glowing with hospitable thoughts. "Oh, dear M—! I want to have you come and meet Miss X while she is with me; you will be so charmed with her. I will let you know what day. Will you come?" To be sure I would "come," but the day was never mentioned, nor any in-

itation, written or verbal, ever received. Over and over again were such words passed from her lips that I began to lose faith, and as time after time "a bird in the air" told us that "Mrs. So-and-So had entertained this one and that one," but this "Ego" never among the "bidden ones," I wondered with a wonderful wonderment.

What more shall I say but to add that far better had been her record had she discharged her indebtedness and relieved her conscience by sending as messenger a certain "innocent" who once upon a time delivered himself thus: "Mother told me to ask you to come and spend the day with her, for she says that she wants to have it over with!"

We talk of "white" lies. There are no "white" lies; all are as black as the ebony wing of Lucifer.—The Herald and Presbyterian.

BELATED LOVE

I have known a husband to neglect his wife in his pursuit of pleasure or business, and when finally she died he wrung his hands over her dead body, called her his angel wife, said his heart was broken and home desolate, and climaxed the whole by having built over the unconscious body the finest marble monument in the graveyard. She asked for love and he gave her a stone. And I thought as I pondered over the whole scene that if some of the loving words he was pouring into the dead ear had been uttered in life, and if some of the dollars he had spent on the coffin had been invested in a way to make life and body easier and less toil-worn, she would have been the happy-faced wife and mother of the home circle instead of sleeping alone under the cedars and among the white monuments on the hillside.

What we want is kindness in life, and not in death. It is not flowers scattered on her coffin-lid that will make a woman happy, but a bunch of them tied together in the form of a bouquet and given her with the words, "I love you." That makes her pulses leap, the crimson come into her cheek, the light come into her eye, and the warm, happy feeling rush to her heart.

We want kindness shown us in this life. This is what our servants look for; this is what the children need—they crave to be treated gently and kindly in life, not wept over in death. Hearts everywhere cry, "Treat me lovingly now." When dead we do not hear the cries of affection around the coffin, or feel the tears dripping from overflowing eyes on our faces. Be kind now.—Revival Sermons.

OUT OF PLUMB

A building that is beginning to fall is not worth much, although it may be held up by a golden prop. A man that must lean is the less a man for that, although he lean on a jewel-headed cane. The Leaning Tower of Pisa holds up its head only because it is light in the upper story. Now, after all has been said, every mason knows that safety lies in the plumb-line, and not outside it.

Your intelligence is a fine thing, but if you lean on it you and your fine thing will go down to the pit together. That is why you are so bowed down with worldly cares and frets and worries, brother; it is because you are leaning on your own understanding, and it is all bent and crooked and weak.

"But what is my understanding given me for?" I hear you ask. It is given you to straighten it up, to direct it toward heaven, to make it parallel with God's understanding; but not to lean upon. Isaiah heard God say, "I will make judgment the line, and righteousness the plummet" (Isaiah xxviii. 17, Revised Version). Straighten up to that, and lean not upon your own understanding.

Ah, what a zest in living when once you begin to let God manage your life! Head erect now, for your leadership is on high. Feet buoyant now, for the path is prepared before them. No more bending to a crutch, face reaching anxiously forward into the darkness. No more backache and narrow chest. You have joined the army of the Lord of hosts. His banner is waving over you. The music of his trumpets rings in your soul. Upright, downright, forthright, forward march for his victories!—Amos R. Wells, in Christian Endeavor World.



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DECORATIVE PAINTING



WHEN fashion exhausts all other modes of embellishing fabrics, and wearies of the exactness of machine-made decorations, she demands the invention of individual artists and the originality of designs coming directly from a skilful hand. When this occurs in the great cities a ripple of influence extends to the most remote country places.

It is reported now that one of the great ladies of New York is wearing a wonderful painted mantle, and at once we begin to paint on silks and satins with the intention of beautifying our garments. The mantle I have mentioned is described as made of grosgrain silk of a cream tint, cut dolman-shape. It is painted all over with bunches of dim flowers; the colors are clear, but with such soft outlines that the whole has a soft indistinctness which makes a charming effect both at a distance and when closely examined. Not only is the silk of the mantle painted, but it is trimmed with painted lace.

When we read about these novelties our thoughts turn to our paint-boxes, and we wonder what possibilities lie in our talents. There are a few dainty articles of dress which it is appropriate to paint; for instance, the ends of a sash. Either taffeta or satin ribbon can be thus embellished. Water-color paint is better than oil, because it is absolutely odorless and has greater delicacy. If the ribbon is white or of a light tint the paints can be used without any mixture of Chinese white. The designs chosen should be like those used now on china—soft, without lines, shadowy, dream-like. In using oil-paints on fabrics the difficulty lies in the fact that the edges will show an oily line; or, as we say, the paint "runs." To avoid this rub on the under side of your silk or satin a lump of magnesia, leaving as much of the powder as will adhere. Thin your paint slightly with turpentine, and if you work daintily I think you will have a desirable result.

If I were asked to mention the greatest faults of the decorative paintings to be seen in the homes of amateurs, I should say, first, stiffness of drawing. To avoid this a person must imitate only the best models. The branches of a tree or the stems of a cluster of flowers are full of the most graceful turns, and diminish toward the ends with a charm-

ing delicacy. See the ngly drawings with straight, awkward lines and inverted proportions. It requires care, daintiness and taste to obtain beauty in the simplest design. Well, but suppose the drawing is good; next I notice an absence of light and shade. The leaves are a flat green, the flowers, if pink, are of but one shade of pink. Now, this is not true to nature. A green leaf, by its curving shape, throws out several greens—from whitish, pale yellow, dull, to brilliant emerald and dark, rich green. The pink of a flower

is almost rose-red in the center, and faint, almost to white, at the edges. Then there comes in soft grays, and there are shadows among the leaves and blossoms. Among the best fabrics to be painted for home adornment is linen. Fine linen crash works up well for bags and the covers of boxes. It can be painted either in oil or water-colors. It is also suitable for cushions. Thin material, such as swiss and bolting-cloth, should be painted only in water-colors. Place them over clean blotting-paper while you paint. When finished they gain effect by being made up with a tinted lining.

Painted lace is of great variety in value. It is not advisable to attempt any very elaborate design, but a simple effort is possible. Choose a pattern of coarse Torchon lace five or six inches deep. Stretch it on a board over blotting-paper. Study the design and make up your mind as to the number of colors you will use. Decide that all similar parts of the pattern shall be dull yellow, certain similar parts Indian red, other parts blue, the edge perhaps a bright gold. Thin all your paints with turpentine, and use a bristle brush. This description sounds somewhat crude, but if you manage with skill you will produce a piece of trimming suitable for sofa-pillow or mantel-scarf that will have a rich, oriental appearance.

K. K.

FULL-CREAM CHEESE MADE AT HOME

Many farmers' wives are deterred from making cheese for the home table because they think it is too much trouble and too risky work. This idea is as fallacious as can be. It is not difficult to make rich, creamy cheese at home. Some years ago I learned to make cheese because I had the opportunity, although I never really expected to put the knowledge to practical use. However, the time came when I had the chance to test my knowledge, and it proved very useful, too. Let me tell you just how to make fine cheese at home:

The utensils needed will be few and simple—the things you will find in your own kitchen, I think. This is just for amateur cheese-making, but the cheese turned out will be just as good as the "boughten" article, and often proves better.

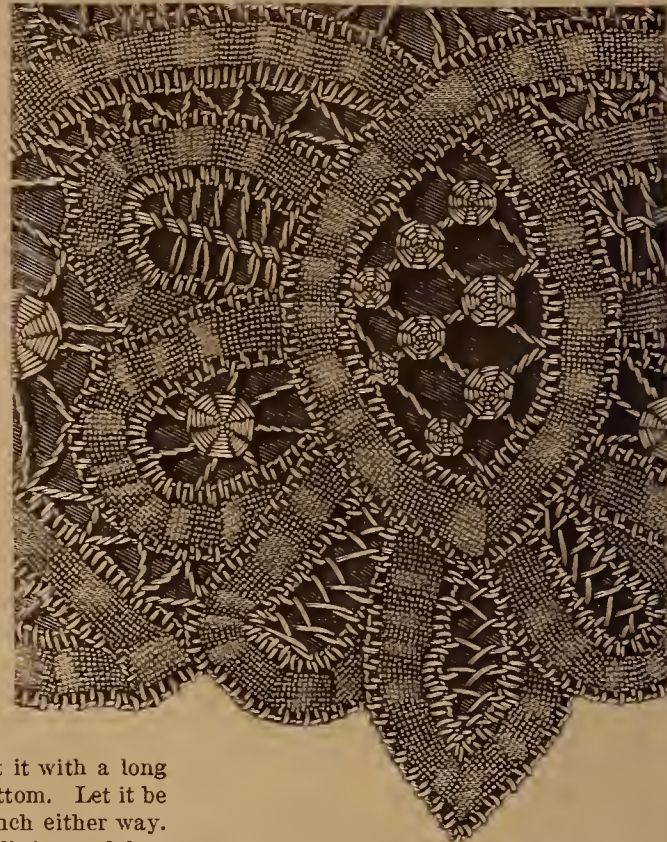
You will need milk, rennet tablets, a boiler, a tub, some cheese-cloth, a dairy

to estimate the weight of the milk to be able to use the correct amount of the rennet tablets. These tablets may be bought at almost any drug-store. They come in boxes, and the directions are given in regard to the amount of milk which they will thicken sufficiently to form into curd. Some druggists are obliging enough to sell part of a box, and for the cheese-maker who only wants to make a few small cheese this is a convenience. I think the tablets cost something like a cent each, the larger ones may be two cents each, but one tablet thickens a good deal of milk. In using the tablets do not use more than directed according to the quantity of milk you have to thicken. Too much rennet also makes the cheese tough.

Having heated the milk to eighty-five degrees, put it into a clean tub, and add the rennet tablets, which have been dissolved in water; stir this well, and then let it stand undisturbed for forty minutes; if at that time it is as thick as thick sour milk it is ready to cut. I like, however, to let it stand until of a good thickness, so that when a spoon is pressed into it it will seem resistant, or so that if the curd is broken a little with the spoon the whey will at once exude. If in testing it does not seem to have reached this stage, then let it stand longer, do not try to hurry it. When right, cut it with a long knife, cutting clear to the bottom. Let it be cut into squares about an inch either way. In a few minutes the whey will rise, and then with a cup or bowl you may begin dipping this off. If you find that the curd comes into the cup too much, lay a piece of cheese-cloth over the clabber, and let the whey run through the cloth. When you have dipped off as much as you can, reach down and break the curd with your hands to liberate more whey. Do this gently, as the more gently you handle the entire cheese the less cream will be liberated. Again dip off the whey, break once or twice more if necessary, until the whey has about all been freed from the clabber. When the dipping has become slow and difficult on account of there being very little whey to dip off, place a clothes-basket slanting-wise in a tub, and put a cheese-cloth in the basket; lift the curd onto this cloth, and let the whey remaining run off in this way. In the meantime heat about two quarts of whey to ninety degrees Fahrenheit. Pour this slowly over the curd, and then work it out gently; if the curd is squeaky when handled it is now ready for the salt. If it does not squeak, then heat another two quarts of whey to the same point, ninety degrees, and pour this over the curd; this should surely harden the curd enough to bring about the squeaky stage. When this whey has been gently worked off the curd is ready for the salt. Cheese takes very much less salt in proportion to the amount of it than does butter; for a cheese weighing some ten pounds about three ounces of salt will be necessary. The milk from some seven to nine cows will make a cheese weighing from ten to fifteen pounds, depending upon the flow of milk, etc. Work the salt into the curd, and then taste it to see if it is salty enough. When the salt has been incorporated into the curd put the cheese-hoop on a clean board, and put a clean cheese-cloth into the hoop; place the curd upon this clean cloth, and even over the top some, draw the corners of the cloth up over the top, and arrange them as smoothly as may be. Put the cover, or "follower," on, and adjust the press. Take care in doing this to fix it so that the cheese will be pressed evenly; that is, not higher on one side than the other. If this does happen the first time it can be remedied when the cheese is turned and changed.

Leave the cheese in the press until night, and then take a clean piece of cheese-cloth, wet it in water, take the cheese from the press, turn it over, put the clean cloth into the hoop, slip the cheese again therein, and cover and press as before. In the morning it will be ready to take out. If it has uneven edges trim these off; rub well and freely with butter. I seldom bandage my cheese, as I have found them much more liable to mold; still some think it best. If you do use a bandage make it from the thinnest possible cheese-cloth, fix it in place, and rub well with butter. Put a clean cheese-cloth on a clean board, lay the cheese on this, and bring the corners of the cloth over the top of

the cheese loosely, but taking care that there shall be no openings through which a cheese-fly might find its way. There is really much less danger from cheese-flies than most of us think, but one may do plenty of damage if it once finds its way to the cheese. Turn the cheese daily, and rub it well. This helps the ripening process and keeps the cheese from molding, as it would do if left lying on one side for a few days in succession. A room not too cool, but well ventilated, should be used for ripening the cheese. Cheese will not ripen well in a cold, damp place.



August and the early part of September are the best times for home cheese-making, partly because there is generally plenty of milk at such seasons and partly because the weather is warm and assists in ripening the cheese. Then, too, butter-making is a little more difficult in dog-days than at other seasons of the year, and its price is not generally so high. All things considered, this is about the best time for home cheese-making.

I have neglected to say anything about coloring the cheese. It will need coloring—about a drop of cheese-color to the pound of milk, if I remember right. The directions come on the cheese-color, but I think about half the quantity recommended makes it plenty yellow enough in summer-time, when the milk holds so much color in solution.

Cheese may be cut in about six weeks, but is better in eight. It will be found pretty green if cut earlier. The longer it stands the more creamy it will seem, though, to be sure, it may stand until it is all dried up and then not be very palatable. I have kept home-made cheese nearly a year, but it is better for the first few months.

It really is not much more trouble to make a cheese than it is to make a batch of good bread. After you have made one or two you will probably never dread the work again, but rather enjoy it, if you have any taste for household and dairy work.

ROSE SEELYE-MILLER.

BATTENBERG CENTERS

This work has proven so attractive to all my readers that I give this one as a sample of how the braid can be used. The number of stitches employed are not many, and in the detail of the work are very clearly expressed. Care should be taken to use only the linen braid, as the cotton shrinks and soon presents a very unsatisfactory appearance.

B. K.

DRESSES FOR WINTER

Busy housekeepers whose work makes it necessary to wear dresses that can be washed frequently prefer cotton to woolen goods, and a variety of outing-flannels, flannelettes and fleece-lined goods have been manufactured to meet the demand. They are so much warmer than calico or gingham, and when washed require no starch, hence, are easier to iron. They make excellent dresses and skirts for children, and there is nothing better for winter night-dresses than light-colored outing-flannel that is not too heavy.

Flannelette comes in plaid, narrow stripes and small checks, in rich, dark shades of green, blue, purple and brown. They are handsome in appearance and very durable, while the price places them within reach of all. Fleece-lined goods comes in most attractive designs, the polka-dot effects and Persian



ing delicacy. See the ngly drawings with straight, awkward lines and inverted proportions. It requires care, daintiness and taste to obtain beauty in the simplest design. Well, but suppose the drawing is good; next I notice an absence of light and shade. The leaves are a flat green, the flowers, if pink, are of but one shade of pink. Now, this is not true to nature. A green leaf, by its curving shape, throws out several greens—from whitish, pale yellow, dull, to brilliant emerald and dark, rich green. The pink of a flower

thermometer (which, of course, you have), some salt, and a hoop in which to press the cheese.

"There!" you exclaim. "But the press, what about that?" That is easily managed. Just have the "gude mon" fix a lever where you want to press your cheese, and the question is solved.

Heat the milk to eighty-five degrees Fahrenheit; do not have it warmer, for if too warm the cheese will be tough. You can use night's and morning's milk together. You will need



FROM THE PAINTING BY
ALICE BARBER STEPHENS

The Nursery.



A LOVING MOTHER IS EVER WATCHFUL OF HER CHILDREN'S COMFORT, AND FOR THE BABY THE BEST IS NONE TOO GOOD

IVORY SOAP is used for the bath, and the little one nestles down in bed with a contented cooing that plainly shows a sense of physical well-being. Ivory Soap is so carefully made that it is selected for uses requiring a soap of extraordinary purity. It floats.



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THE PROCTER & GAMBLE CO. CINCINNATI.



figures on black ground being the prettiest seen in a large assortment. The garments may be made in any plain, pretty fashion, using no trimming that will not wash nicely.

Dresses for little girls are pretty with a plain, close-fitting waist, full skirt made of straight widths deeply hemmed, large pointed collars, and full sleeves gathered into cuffs. Another pretty style has a square or round yoke, plain coat-sleeves, with a ruffle put on at the top epaulet fashion, and the neck finished with a plain band. Sailor costumes are stylish and comfortable, and are easily enlarged when outgrown. Ladies' house dresses are usually made princess shape, or any of the plain tea-gown patterns are pretty for them.

These goods do not shrink, and it is easy to keep them from fading if the proper care is taken in laundering; but careless washing will make the colors dull and dingy in a short time. Prepare a separate water for them, for if washed after the white clothes the lint will stick to them. Dissolve a little borax in it, and add enough soap to make a good suds. Two waters are usually necessary for washing. Rinse in lukewarm water, pass them through the wringer, and hang them on the line. Borax should always be added to the water in which colored clothes are washed, as it makes them easy to wash and does not injure the color. When they are taken from the line, dampen a little, roll tightly for an hour, and iron on the wrong side.

E. J. C.

MY UNCLE CHARLEY

My Uncle Charley he ain't got no children of his own,
Nor any wife nor parentses, but just lives all alone!
It must seem awful quiet, 'cause he says he likes the noise
'At makes so many growed-up folks find fault 'ith little hoys.
He says they ought to run an' play an' holler all they will;
A boy won't grow a mite, he says, 'at has to keep so still.
An' Chris'mus time he buys us horns an' squawky things an' drums.
An' ma she lets us have 'em, too, when Uncle Charley comes.

He says sweet things won't hurt your teeth as much as parents say,
An' s'pose they do, boys has to lose their first ones anyway.
He says that's why we ought to eat just all 'at we can get
Of sugar-candy things before we grow our second set.

So every time he visits us my Uncle Charley brings
His pockets running over, 'most, 'ith just the nicest things!
They's candy mice an' candy men, an' lots of sugar-plums;
It's most as good as Santy Claus when Uncle Charley comes.

He don't think little hoys an' girls should go to bed so soon,
But says they ought to stay up late an' sleep 'till nearly noon.
So when he comes to our house, ma she lets us have our way,
An' us an' Uncle Charley we all play an' play an' play.
He harks just like a dog, an' makes our old cat growl an' spit!
He knows the mostest funny tricks! An' when the lamp is lit
He makes us shadow-pictures with his fingers an' his thumbs.
It's good as going to a show when Uncle Charley comes.

But sometimes ma she says she bets if Uncle Charley had
A half-a-dozen boys an' girls all carrying on like mad,
An' turning things all upside-down an' crisscross every day,
He'd want to pack his trunk right off an' hurry far away.
But one time, when our neighbor's boy was awful sick and died,
Ma hugged an' kissed us, every one, an' cried an' cried,
Nor said a word when we was bad an' scattered cooky-crumbs,
But cuddled us just like she does when Uncle Charley comes.

—Nixon Waterman, in L. A. W. Bulletin.

CHILD'S BONNET

This can be fashioned from any desired material—in wash-goods for summer, or wool material for winter. The length around the child's face is taken, and marked upon a paper for a pattern. Six inches is allowed either side of this for the depth of the cape, then draw a circular line from these two points. As the crown is tied in with the strings at the back it is plain to be seen why the depth is greater at the back. It can be trimmed with lace, ribbon or the material plaited. It's warm in winter, and in summer it is a protection from the sun.

B. K.

READING-CLUBS

These clubs are becoming quite common throughout the country, and where they are once organized they are almost sure to be continued. I know of one which has just commenced its sixteenth year, and the good it has done can hardly be estimated.

It is an established fact that farmers' wives, who really do not work much harder than the wives of poor mechanics in the towns, break down much sooner, and the only reason that can be found for this is the isolation and lack of variety in the everyday life of women in country homes. The farmer's wife not only sees less society, but she goes less to church, has fewer books and papers to read, and consequently her mind is kept more constantly on her work. While it is true that there is a great variety in a housekeeper's work, yet it is all in the line of clothing and feeding the family. A woman who is the sole occupant of the house during the greater part of the day should have something besides her work to think about and the pleasure of looking forward to meeting and talking with friends, or her health will surely suffer from the seclusion. The farmer often has another at work with him, and then his work takes him more often from home—to the mill and the blacksmith-shop and the neighboring town, where he meets other men and exchanges views not only on his farm-work, but on education, politics and religion.

The mind has more effect on the health than hard work. If the women of each neighborhood or school district would organize a club, and pursue such a course of reading as they deem the most pleasant and beneficial to them, they would soon feel amply repaid for the time it would take. It would lift their minds above the dull routine of their work and effectually cure any tendency to idle gossip—that bane of so many neighborhoods. So many women drop all studies as soon as they leave school, or at least as soon as they marry, until in a few years they are too ashamed of their ignorance to try to talk with any on even the most common topics of the times; then they plead their much work and many cares as an excuse for this. If one has many cares it is all the more necessary that she has some useful and pleasant diversion to make her forget them. Do not try to read too solid reading when the body is exhausted from physical labor. There are times when one is too "tired to rest," paradoxical as this sounds; when sleep will not come these times demand a change, something that will take us out of ourselves, and nothing is better for this than a good story or poem, such as are found in our leading magazines. The Chautauqua courses of reading have been of inestimable value to many thousand women. Thousands of hungry minds have been fed on the best of food by their help, and lifted to a plane of thought above the daily cares and anxieties of their life. The Cosmopolitan University of New York is another school of correspondence which perhaps covers even a broader field than the Chautauquan. An article in the "Cosmopolitan Magazine" on this subject says: "It is thoughtful study that makes the good citizen, the good husband or wife, the efficient workman and the desirable

as the Cosmopolitan University and the Chautauqua Reading Circle that there are very nearly a million people anxious for the advantages such a school would provide. A bill is to be presented in Congress this winter which will provide for the organization and maintenance of such a national university, under national control, but governed by a board of trustees, nominated one by each of the great universities and free from all personal interests and from politics. When the time comes, no doubt petitions will be circulated and all friends of education given an opportunity to lend their influence to secure the needed legislation.

In the meantime we must do the best we can, organize some kind of a reading-club, and have a less of looking down at work and a little more of looking up and out at the beautiful world of nature; and instead of thoughts of ourselves and our cares and anxieties let us find place for the beautiful



thoughts of others, given us in so many books and magazines. I know it is easier to preach than to practise, and that we sometimes feel that our duties are so many our time is wholly filled. Yes; but isn't it a duty to make the most and best of our lives? It is so much easier to do right when we are not tired and cross. Then let us see if we cannot simplify our work, leave out some of the things of least importance, and gain time for occasional ontings and for reading.

MAIDA McL.

SOME NEW IDEAS FOR GIFTS

Every mother will see at once how handy a ribbon-box for the new baby will be, to always have narrow ribbon ready to run into little sleeves and shirts.

Purchase two rolls of baby ribbon of delicate tint (let one of them be white), and roll them into loose balls. Cover a box that will hold them with silk or linen embroidered with tiny flowers, cutting two holes in the cover large enough to draw the ribbons through. Fasten the cover into place, but before doing so put a strap of narrow ribbon across it. Get two ivory bodkins, and thread one upon each ribbon, then slip them under the ribbon strap. Some fasten a pair of tiny scissors to the box by a ribbon.

Now that the chafing-dish is so popular, a new sort of cook-book is the go. Get a small square blank-book about six inches square, and cover it with brown linen upon which is an outline design of a chafing-dish and the words, in script, "My Chafing-dish." With a silk cord fasten a program pencil, or if you can afford it a pretty silver pencil. This last is optional, as most persons would rather write the recipes with ink, but it adds to the looks. Into this book are copied all the dishes that the owner can cook with success.

A pretty calendar was lately shown that is for a gentleman. Twelve five-by-eight card-mounts with embossed borders had two holes punched at one end, and ribbon tied through the holes so as to form a book. Upon each card at the outer end was pasted a four-by-five photograph, while at the other end was a small calendar. The photos represented views that were in season. This is a charming way for the girl who owns a camera to remember her friends.

Another way to mount photos is to take twelve mounts with wide embossed borders, and paste them upon two-inch-wide ribbon, in a row, with a quarter-inch space between them. Mount a photo upon each card, and then fold them back and forth into a book, like a folder. Let the ribbon extend two inches beyond the cards at each end.

Now make a case to slip the folder into. This is pretty made of brown or white linen with tiny flowers upon it. A good way is to make an envelop-shaped case with a flap, and tie it with ribbons. Upon the front of the case put the name and address of the person you are going to send it to. Embroider this with fine silk in outline-stitch, and put some little sprays of flowers around the corners.

MAY LONARD.

VARIATIONS ON THE OYSTER THEME

SCALLOPED OYSTERS.—One quart of oysters, one third of a cupful of butter and two cupfuls of cracker-crumbs are used for this dainty dish. Drain the oysters, butter a pudding-dish, moisten crumbs in the butter (melted), put in a layer, then one of oysters; season with salt and pepper; the crumbs again, and so on, having crumbs on top; add the liquor and a little milk to each layer of crumbs and on top. Cover, and bake half an hour; then remove the cover, and bake until brown.

OYSTER PIE.—Make a dough as for biscuit, only richer. Roll one fourth of an inch thick; line a baking-pan, bottom and sides—a round pan is best—and fill in with clean white rags; roll out top crust somewhat thicker, place over the rags without pinching the edges together, bake, and when done take off the top crust, remove the rags, and put in the oysters already prepared as follows: Drain one quart of oysters; heat the liquor, and skim, add one half a pint of milk, and skim again after it boils; then add the oysters and a hump of butter, salt and pepper. Thicken with one heaping teaspoonful of corn-starch moistened with cold milk. When it has cooked thick and creamy it is ready for use. Pour a very little catchup in if desired.

OYSTERS ON TOAST.—Put one pint of chopped oysters on to boil in their own liquor, to which has been added one cupful of rich milk. When boiling add one teaspoonful of corn-starch, rubbed smooth in a little cold milk, to two well-beaten eggs; stir this into the broth, and when thick and creamy pour over slices of hot buttered toast.

OYSTERS AND MUSH.—Make mush as usual. When done throw into it a solid quart of oysters; salt to taste. Thoroughly mix, and pour out to cool. Cut in slices, dip it in flour, and fry. This is best made at night, to be used the next morning.

FRIED OYSTERS.—Drain the oysters. Take one part corn-meal to two parts of cracker-crumbs. Mix in this one teaspoonful of baking-powder in proportion of one spoonful to one quart; salt and pepper to taste. Large oysters need not be used in this instance unless desired; lift up several on a fork, dip in a bowl of milk, and drop in the prepared crumbs. Pat into rolls, using plenty of crumbs; lay out to dry on a cloth sprinkled lightly with meal. When ready to fry them have lard enough to cook them as you would doughnuts. Drop in an occasional slice of raw potato to keep the grease from turning brown.

MARY M. WILLARD.

THAT "HOUSEKEEPING MONEY"

The much-discussed question of the wife's allowance, or the "housekeeping money," might readily find a solution in the old saying, "Place confidence in a woman's ability to act and she will repay it; doubt her executive powers—refuse her responsibility—and you may rue it."

If every man would pay his wife a weekly sum for the housekeeping expenses, clothing etc., he would find that in nine cases out of ten her management of the fund would increase not only his comfort, but that of the whole house.

If she is equal to the task of being a wife and mother she is also equal to the task of supplying and paying for the daily necessities of the home.

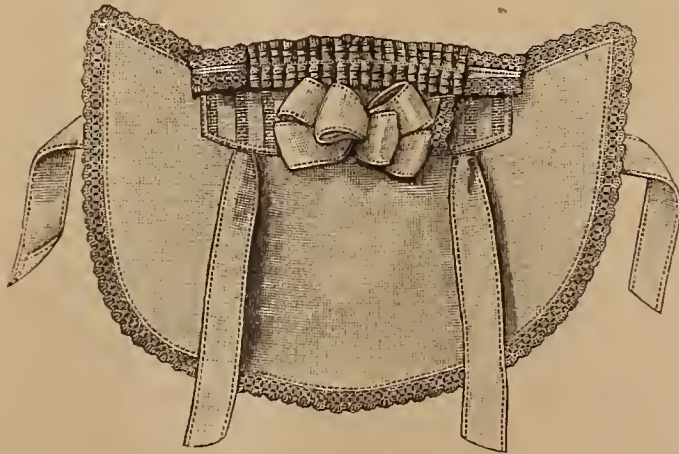
If she is head manager of the housekeeping department she will take pride and pleasure in making one hundred cents go a great way, much further than a man could make a hundred and fifty go, when expended for household uses.

She will make calculations about the expenditure of the weekly sum, and lay by a certain amount toward buying certain supplies in quantities. She will soon learn that there is no economy in buying soap by the bar, and starch and sugar and flour by the pound.

She will systematize her affairs, and take pride in her well-kept accounts; and the very fact that the expenditure of money belongs to her will sweeten her life, give zest to her occupations, and make her more contented in her home life.

S. W. H.

(Continued on page 14)

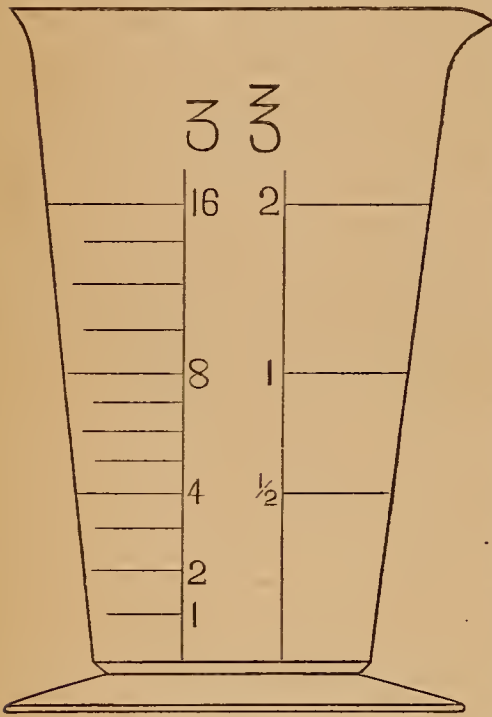


THE GLASS GRADUATE

THE glass graduate of the chemist is a household necessity, and where babies, children or invalids are occupants of the home it is quite indispensable.

In the administration of medicines exact measurement in most cases is absolutely necessary. Spoons, cups and small glasses are the usual mediums for this purpose, but they vary so in size that they cannot always be depended upon, to say nothing of the inconvenience attending their use.

The odd appearance of the graduate gives it individuality; one seldom forgets where it was last placed, and one would never think of using it, or finding it used, for else than its purpose. Therefore, it has a known mission, which lessens the liability to accidents and fatalities that so frequently occur from mistaking the contents of cups, etc., used indiscriminately for sick doses. The glass graduate is easily and thoroughly cleansed by the use of soap or washing-soda and water: it is durable if ordinarily cared for and not immersed or filled with boiling water; it is cheap in price when its superiority over spoons, etc., is considered. In capacity graduates range from the minim size, containing one hundred and twenty drops, to ones holding thirty-two ounces and over. They can be purchased from any large glassware establishment, wholesale or retail chemist, or ordered from a drug-store. The average price is as follows: Minim size, thirty-five cents; one ounce, thirty cents; two ounces, thirty-five cents; three ounces, forty cents; four ounces, forty-five cents; eight ounces, sixty-five cents; sixteen ounces, one dollar; thirty-two ounces, one dollar and seventy-five cents. They can be obtained marked with either



the English apothecary fluid measure or the metric system, or both if preferred. The cost of the duplex variety is about double the above rate. If but a single graduate is purchased the two-ounce one will be found most practicable for general use. When the selection includes two, the minim and four ounces are the most satisfactory.

To the uninitiated the marking on a graduate is a mystery. The easiest system for the novice to learn and understand is the English apothecary. The explanation of one will suffice, for the method is the same for all. It should be remembered that M stands for minim, 3 for dram, 3 for ounces, O or Pt for pint, and C for gallon. One drop is usually one half minim; sixty fluid minims make one fluid dram; eight fluid drams one fluid ounce; sixteen fluid ounces one pint, and eight pints one gallon. The capacity of a teaspoon is about one dram, a dessert-spoon two drams, a tablespoon four drams, a wine-glass one half to two ounces, a teacup five ounces, a breakfast-cup eight ounces, and a tumbler ten to twelve ounces.

Taking a two-ounce graduate for example (see illustration), the marking will be found as follows: At the top at the left is the symbol for drams; on the right the one for ounces. Commencing at the bottom at the left the first number is one, which means one dram; the next numeral is two, standing for two drams; then follow in succession four, eight, and sixteen drams respectively. On the right, or ounce side, on the continuation of the four-dram line is marked one half, which means one half ounce; then follow the numerals one and two, indicating that number of ounces. The minim graduate is marked M on the right and 3 on the left; the right designating minims and the left drams. The larger ones bear the ounce, the O or Pt for pint, and C for gallon.

It is all very simple, and if a few moments of study are given to the apothecary's table of weights and measures, and the practical use of the graduate, its worth and superiority over the usual domestic makeshifts will be immediately recognized. Its convenience, reliability and general usefulness make it of value in the kitchen as well as in the nursery and sick-room.

ORMSBY A. COURT.

SPOILING OUR CHILDREN

I often am led to believe that my farm neighbors could not do anything more than they are doing to spoil their children for farm life. The whole tendency of education and home training is to drive them away from their country homes to shift in town life. If you care to get rid of your children, as quick as they can imagine themselves capable of self-support follow the following rules:

(1) Bring them up ignorant of farm knowledge. I do not mean bring them up without knowing how to milk cows and harness horses, but bring them up without a hint of all these facts and truths that are hidden in leaves, tree growth, the geological make-up of the soil and the inhabitants of both earth and air. Give them no knowledge of entomology or botany or of geology. Carefully keep from them such books as the "Population of a Pear-tree." Let them consider that the sum of knowledge is mathematics, and possibly a knowledge of the language. They will then be thoroughly ignorant of the thousand things that make rural life interesting and attractive.

(2) Dress your children extravagantly. Adjust their whole lives to the thought that life is a failure, except as it moves along with social conventionalism. By all means prevent them from that simplicity of thought which puts them into key with such writers as Thoreau and Burroughs.

(3) Talk of your constant self-denial and lack of advantages from being compelled to live in the country. Bemoan your hard lot. Make the family topic the superior advantages of city life. Have on your table such novels as those written by Hamlin Garland, stories expanding the dreariness, isolation and hopeless wretchedness of the farmer's wife and family.

(4) Be sure to make your home a work-house, without taking into account any other requirements of human nature. Compel your children to toil in filthy clothes from early morning till late at night. Sneer at your neighbors who indulge in a croquet-field or tennis-court. Be hard; make life hard. Despise all ameliorations as unfit for the farmer.

(5) If you raise good things, sell them. Feed your family on the refuse. Don't spend money that is hard-earned on trees and flowers. Emphasize the pork-barrel, and indulge the family freely in greasy, disagreeable diet.

By carefully following these directions you will have an average spoiled family for all practical farm purposes.

LUCY ROWELL.

SOME GRAHAM RECIPES

GRAHAM GINGER-CAKE.—

- 1 cupful of syrup or molasses,
- 1 cupful of sugar,
- 1 cupful of lard,
- 1 cupful of thick sour milk, in which dissolve one teaspoonful of soda,
- 1 heaping teaspoonful of ginger.

Add whole-wheat flour, or half Graham and half white flour, and bake in a moderate oven. By adding one teaspoonful of cloves and one teaspoonful of cinnamon it makes a very good spice-cake.

LEMON COOKIES.—

- 1 cupful of butter (or lard and butter mixed),
- 2 cupfuls of sugar,
- 2 eggs,
- 1 cupful of sweet milk, with the juice and grated rind of a lemon in the milk,
- 1 teaspoonful of soda dissolved in the milk.

Mix stiff enough to roll with whole-wheat flour, or part Graham and part white flour. Bake in a quick oven.

LUNCH FRUIT-BISCUIT.—Mix one quart of whole-wheat flour (or one half Graham and one half white flour), two teaspoonfuls of baking-powder, one teaspoonful of salt, one teacupful of sugar, one tablespoonful of lard; then add one teacupful of raisins. Mix with water until as soft as biscuit-dough; roll out, and cut with a biscuit-cutter, and bake in a quick oven. W. E. H.

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Big Bonanza	9 to 10"	2 1/2 to 3 1/2"	4 to 5"		20.00 "
Potato Special	9 to 10"	3 1/2 to 4 1/2"	6 to 7"		23.00 "
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A GIRL FARMER

By Annie M. Burke

CHAPTER I.—CONTINUED



WHEN they were quite done he told them about the fresh, healthy-looking young woman who had come across the hedge to his rescue.

"Oh, you ought to see her, mother!" he cried, enthusiastically. "Peach-blossoms are nothing to her cheeks! And her eyes—they look like they were just new! New eyes, you know, mother!"

"Land, now, Joey, you don't say!" said his mother. "Then that must be because she works outdoors. I never saw a girl yet that worked outdoors all the time and kept her sunbonnet tied but what had a pretty color—never yet!"

"But how funny of her to work outdoors!" said Amy. "I wouldn't drive a stalk-cutter for anything—not for anything! Just think of it, Ruth! Staying in the field all day!"

"She can't be a nice girl," said Ruth, "if she has a pretty color. No nice girl 'nd go and work in the field all day like a man!"

"A tomboy, I guess," said Bessie, the youngest. "A tomboy? I guess not!" said Joey. "She's as sober-faced and has got as much common sense as a dozen girls. And as to her farming—I've an idea she could give you good reasons for her doings if you went to faulting her any."

Joey was rather standing up for this girl now. He forgot his conversation with the McFarlan boys two days ago, when he had said "women ought to stay in the house and mind their own business; if his women-folks went tearing over a farm like that he'd tie them up," etc. But Joey had seen the girl since then. He had stood near her. He had looked upon the bright, fresh color, the clear eyes, the straight, supple body so full of strength and health. And Joey already had half changed his mind about "female farmin'." Joey had worshiped unusual strength and health and beauty, though he could never have any of them himself.

"Just the same, Joey, I'll bet your splendid girl can't keep house like Ruth and I can," said Amy. "She hasn't made nine patch-quilts all herself like I have, and I'll bet she can't make such tidies and crazy-work as Ruth does?"

"And I don't suppose she can do fancy cooking, either," said Ruth. "She can't make a pudding with thirteen ingredients in it as I can. And she can't make twenty-three kinds of pie. No, you can depend on it, a mannish girl like that can't do the housework we can!"

Just here their mother gave her opinion. "When I was a girl," said she, "I used to pick corn for six weeks every fall. I went out every day an' took the down row behind father's wagon, an' didn't think I was doing anything wonderful, either. Then I dropped corn in the spring as reg'lar as the season came. An' bindin' wheat—many's the hot day I've kept by father's side round an' round the field! We didn't have cheek-rowsers an' self-binders when I was a girl, I tell you! Them was prairie days, an' us girls was glad to have a crop to help harvest. We didn't stop to think whether it was ladylike or not. We could sew an' could cook good, wholesome food, an' we were a lot healthier an' happier than the girls are nowadays! I didn't stew myself to death over the stove half a day at a time makin' some new-fangled, mixed-up pudding, an' I didn't wear out mind an' body in fancy, overfine housekeepin'; but I wasn't afraid of a settin' hen, an' I knew which side of a cow to sit down at to milk, an' that's more'n any of my girls can say! There ain't an old hen on the place but can chase Amy if she wants to, an' Ruth's ready to faint if a cow looks at her!"

Joey laughed and shouted and cheered his mother on. Thus encouraged, she continued:

"When I was married eight years an' had had four children runnin' round after me I looked younger and felt younger than any girl I've got. I didn't have to wear spectacles in my teens, an' I wasn't all nerves and weak back. Fine sewin' an' fancy cookin' an' overfine housekeepin' is all right, but when they get into spectacles an' overwork an' weak back an' poor nerves I say it's time to stop! Talk about sickly, overworked women—if there's any place on earth where the women are sickly and overworked it's in the farm-houses nowadays. I don't know anything about this Mollie Gordon, but I'm safe to say, as she's got an old grandmother or aunt to look after the house, she's a lot better to be ridin' the planter an' mower an' binder out in the open air all her spare time than she is to be shut up in the house patchin' calico into quilts or studyin' receipt-books!"

"Bravo, mother! Well done! You're ahead!" cried Joey.

But the girls did not applaud her any. Bessie curled her lip, and said she did not care, but Ruth and Amy said nothing. Amy's chin trembled, and she had to wink to keep back the tears. It was true she was "all nerves," and she had a weak back, and she did wear glasses. But she was the eldest, and she worked very hard and faithfully, and would rather be praised for it than to be made sport of.

Mrs. Madison did not notice the tears, but Joey did. "Amy's a good cook anyway," he said, patting her pale cheek. "I doubt if there's a better

in the county. And I know one or two young fellows, too, that 'nd like to get her to cook for them for life if they could, wouldn't they, Amy?"

After such comfort as this Amy, of course, soon recovered her spirits. Then Joey turned to his mother. "But I want you to stand up for the Gordon girl, mother," he said, with seeming carelessness. "Some day I think I'll be falling in love with her or with one just like her; then you will have to stand by me, for the girls here won't like it, of course."

"Do you suppose we'd stop you of getting the girl you wanted? No, indeed!" said Ruth, putting her arm around his neck affectionately.

"I would stop him! I'll never let any girl have Joey as long as I live!" said grateful Amy, kissing his hand.

"Now, kiss him and cry over him, do! It's so sensible!" said the mother.

Mrs. Madison always made a great show of common sense in her treatment of Joey. She never caressed him or petted him as his sisters did. However, down in the bottom of her heart she was fonder of him and more foolish about him than any one of them. If she defended the Gordon girl it was because she strongly approved the outdoor life for women, and not because she wanted Joey to admire the girl any more than he already did.



"GIVE ME MY BONNET," SHE SAID

"Thirty-five is soon enough for Joey to think of marryin'!" she was wont to say to her neighbors (Joey was twenty-five now). "The girl that gets my Joey from me before he's thirty-five'll be smarter than I am; that's all!"

She had been known to say this many times, and there were certain girls in the neighborhood who, having failed to catch Joey's fancy, were wont to blame his mother, and quote her spitefully in this saying. "The girl that gets my Joey before he's thirty-five'll be smarter than I am; that's all!" they would say to each other, with meaning giggles.

However, long after bedtime that night, when all the rest of the family were asleep, Joey sat alone out on the back porch and did some thinking that might have alarmed his mother if she had known it.

CHAPTER II.

The first thing Joey did after hitching to his stalk-cutter the next morning was to look eagerly over into the neighboring field. But Mollie Gordon was not there. Her stalk-cutter stood idle. Deep disappointment oppressed Joey. "She must have had housework to do this morning," he thought. And he began to feel lonesome and blue. To be sure, there were the McFarlan boys over the other fence. He could hail them and talk awhile if he wanted company. But the McFarlan boys were dimly uninteresting now, after the Gordon girl.

Then suddenly, when he had given up all hope, he saw a sunbonnet appear over the brow of a hill in the next field; then the gray horses and the stalk-cutter. Instantly all was sunshine again for Joey. He managed his driving in such a way as

to meet her every time she came to the hedge. But the girl would not stop to talk or be neighborly; not one moment. Joey shouted out "Good-morning" to her anyway. She replied to this, but kept her splendid grays stepping lively. She continued in this all day. Once, near quitting-time, she tied her horses to the hedge and went to the mouth of a tile-ditch near by for a drink. The mouth of this ditch was on Mollie's side of the hedge, but it was a place where Joey had often gone for a drink even when old Frazier owned the place, the water being cold and pure. In the hot harvest-days he had gone there a hundred times. It was not hot weather now, and Joey was not at all thirsty, but he vowed if Mollie went there for a drink again he would go, too.

He succeeded in this. At quitting-time, on her way to the house she stopped for another drink; and Joey was there, too. He had quite a friendly talk with her here about the weather and the crops and the condition of the ground. But he spoiled it all before they parted by beginning to talk nonsense to her. He hinted that he wished she would push back or take off her sunbonnet; he wanted to see how she looked without it. Upon this she immediately turned her back on him and drove away.

Joey sat down on a pile of rails and laughed rather weakly; but he was fascinated, too—very much fascinated. She was just as lovely as he had thought she was the day of the runaway—the same bright, fresh color, the same clear, "new-looking" eyes; and then she was so straightforward and sensible.

The next day Mollie finished her stalk-cutting in the middle of the forenoon, and went to the house. Joey was disconsolate again. She would not be in the field now, he knew, till away on in May, in corn-planting time, for she had a boy engaged to do the plowing. "But I'll see her somehow," he

hollows or when it rolled against the hedges? But surely you noticed when the sun came out and shined into it all?"

"No, I didn't notice," said Mollie again. "I just thought how wet it was for planting."

Joey was in despair. "That's just like you!" he said, indignantly. "You're watching to get the crop in right, and to make money, and you don't care how beautiful anything is."

Mollie gazed at him in wonder.

"I tell you, Mollie," he cried, "you miss the best part of farming; you miss the very best thing in it when you don't notice these things!"

"I don't see what there is in looking at an old corn-field, even if it has a fog on it," said Mollie.

"That's just like you!" said Joey again. "Mollie," he continued, earnestly, "have you ever read about great wonderful scenery and heard about it and wished you could see it?"

"Yes, lots of times," said Mollie.

"Well," said Joey, "I've seen the Rocky mountains—been out to Denver twice, and I was out to the Pacific once and saw the coast ranges; then I've been to the Great Lakes and have been back East a little. I've seen a good many of these brag things you hear so much about. I know what they're like, and I tell you, Mollie, we have scenery of our own right here in the corn-fields and oat-fields and hedge-rows and groves if we will only look at it! You don't miss anything, either, nor lose any of the profits, by appreciating the beautiful things as you go along."

Mollie looked thoughtful, and Joey began again: "I don't believe there ever was a fellow enjoyed farmin' more than I do. I—"

"That's because you're rich and have so much land," put in Mollie, promptly.

"No, it isn't," said Joey; "it's because I get all there is in it out. If I didn't have any land at all I'd be a farmer just the same. You know I told you I went to school at the state university for four years. An agricultural place it is, though when I went there most of the fellows were studying to be civil engineers, or doctors, or something else. Well, when I graduated there they wouldn't believe I meant it when I said I was going to farm. They thought I was joking. They said any fellow with an education and any money at all to start him in anything else was a fool to settle on a farm. Well, I saw some of those fellows that said that last June. One is a lawyer, been trying to get a start for two years; another is a doctor, been banging on in a country town ever since I last saw him, waiting to get patients. I couldn't stand their lives two weeks! It would kill me! I don't believe either of 'em ever has ten dollars ahead! There isn't more than one or two in the whole class right successful yet, and I wouldn't change places with one of 'em—not one of them. There isn't one of them has the enjoyment and content and fun I have."

Mollie looked at Joey with respect, even sympathy. Any one who had three eighties in his own name, and plenty of money besides, as Joey had, and any one who was as free to choose his own way of life as he was, and who yet could talk in this way about farming, was to be approved of.

"Those other fellows—" she said, "the reason they try to be lawyers and doctors is because they are too lazy to work."

"I believe it—sometimes," said Joey. "But all this was not what I started out to say, Mollie. What I want is that you notice all these beautiful things I spoke of. I can't bear that you should go pushing past everything nice without looking at it, but just thinking about the crop and making things pay."

"Well, then, I'll think about it," said Mollie, rather agreeably.

"And you will notice the pastures and fields and groves as you go along, and think how beautiful they are?" said Joey, eagerly.

"I will," said Mollie.

And Joey went back to his own field and his corn-planter whistling. But this young man's serious states of mind alternated regularly with periods of nonsense. The next morning he was with Mollie again for a few minutes. She had been going up and down her field nearly all the forenoon, thinking she was planting as usual, when, to her dismay, she found that the old check-rower had not been dropping a . . . Joey soon found out what was wrong with the machine, remedied it, and found the place in the field for her where she must start over. Then Mollie told him he must not tell any one that she had planted for half a day without dropping any corn.

"If the men in the neighborhood were to hear of it," she said, "they would sneer and laugh and say women never did know anything—that they were always simpletons about farming, and I'm not going to have them talking so!"

"It is a joke on you, Mollie," said Joey; "but I'll keep it a dead secret on one condition."

"What is that?" said Mollie.

Joey hesitated a second or two, then spoke. "I want to see you with that sunbonnet off, Mollie," he said.

This was an oft-preferred request of Joey's, and Mollie, now as before, gave him a look expressive of contempt. But Joey was not vanquished.

"Just think how long I've been acquainted with you," he pleaded; "and I've never seen you without that sunbonnet on yet—never once. I hate it! I despise it! Sunbonnets always were mean things anyway. You never can tell what a girl means by what she says unless you can see her face, and if she has a sunbonnet on she can tilt it ever so little and shut off your view. She may be shedding tears of sympathy or she may be making fun of a fellow, and he'll never know it if she has a sunbonnet on! But what's more than that, you can't tell how pretty she is, or—or—how homely she may be," hinted Joey, slyly.

But hints were lost on Mollie. "Will you promise not to tell about my planting?" she asked.

"About your not planting, you mean," said Joey. "Will you promise?" she asked, impatiently.

"Not unless you take off the sunbonnet!" "Then tell!" she said, recklessly, as she drove away. But in her heart she was pretty sure he would do no such thing; it was not in him to be so mean.

"I'll see you without that sunbonnet some day," he called after her, revengefully. "I'll go to see you at your house some time, and then you won't have it on. You don't wear it in the house, do you?"

"I will if you come to see me!" she shouted back to him.

That day Mollie finished planting. This ended her work in the field for a long time. Not till hay-making, when she could ride the mower and rake, would she be "farming" again, a boy being engaged to harrow and plow. However, she had an abundance of outdoor work to do. There were chores morning and evening, for she had several head of healthy, thriving stock to feed and care for. Then there was fencing to look after, a little garden to tend, besides a great deal of cleaning up to do about the yards; for old Frazier had been a most shiftless resident. Mollie longed to put in order these things. She was determined that no drooping fences, no old, tumble-down sheds or dirty brush-piles should remain on her premises. Of course, part of this work she had to hire done. She could not set fence-posts. She could dig a post-hole, but when she was done the post would always wiggle, and she scorned a job that was not well done. Then she could not tear down and take away the useless old sheds, of which there seemed to be a great number on her place. Also she could not swing a scythe or hedge-knife without getting very tired, and early in her farming experience Mollie had found out it was not best to undertake any work that tried her strength. However, she could burn brush and rake and hoe and clean out dirty fence-corners, and she could nail fence-boards and straighten up fallen gates and paint them. Of painting she did a great deal. The little brown farm-house, the weather-beaten barn, the outhouses and the principal gates about the yards were made fresh and new with her paint-brush. Besides all this work she had great flocks of poultry swarming over her place, and they needed much attention at this time of the year.

Of course, the neighbors kept track of the girl's doings. They saw the old ramshackle, run-down place blossom into a trim farm. The old sheds and brush-piles and dirt-heaps and underbrush that had been cleared away left great clear spaces and clean spots that had been choked for years. The trees and shrubbery that were left were trimmed and put in order; then the paint-brush had made everything look like new, while the clean fields and good fences and great flocks of poultry looked of all things like prosperity.

"What a girl she must be!" one neighbor after another would say. "It does heat all! I never saw the like! Did you ever see a place so changed?" Jed Barker more than ever talked about "the girls that used to be," and said how this one was equal to any of them. The old men generally approved of the girl, and said she was one in a thousand. The older women, too, who had lived in sod shanties on the prairie when they were Mollie's age said she was a splendid young woman. But the girls of the neighborhood thought her doings were "horrid," while the young men all maintained that "women ought to stay in the house and mind their business."

Many of the neighbors called at the Gordons' in a friendly way. They got to see the grandparents, who were two decent old people, and the children, who were two pretty little girls; and they got to see the aunt, who was a lively, youthful matron of sixty or more; but Mollie they seldom met. She was always outside. They were much piqued at this. They had no end of curiosity about her, and were constantly asking the Grahams, to whom she was related, questions about her.

However, there was one person in the community who counted himself well acquainted with her, and who was glad the others were not. This was Joey Madison. At first he used to talk about her a great deal, and make the McFarlan boys sigh telling how beautiful she was. But now he had rather stopped this. He did not talk so much, but he thought more than ever. Also, he remarked, he got to see Mollie occasionally nowadays, though she was no longer in the field. To go to the blacksmith-shop he had to pass the Gordons', and the blacksmith-shop was a place where Joey had to go very often. On a big farm, where many implements are used all the time, there is always something breaking or wearing out; something for the blacksmith to repair. Now, in passing Mollie's home you were almost sure to see her out about the yards some place, and very soon Joey grew bold enough to stop in off the road and talk to her while she fed the calves or pumped water for the horses beside the barn. He gave her many droll pointers and much nonsensical advice about running her farm, but Mollie never talked to him much, or seemed to heed him particularly, though she always tolerated him.

One afternoon as Joey went along the road he saw her sitting on the ground in the orchard in the midst of a little colony of hen-coops. She was bending over and earnestly examining something she held in her apron. Beside her in the grass was a bright scarlet object. Joey recognized it instantly. It was her sunbonnet! Mollie was bare-headed! He sprang over the fence, ran swiftly, silently, up under the trees, and snatched the bonnet.

Mollie started violently, and let half a dozen little turkeys fall out of her apron. Then she comprehended the situation, and a quick flash of anger crossed her face.

"Give me my bonnet!" she said, getting upon her feet.

"Ab, now, that's just like a girl!" cried Joey, indignantly. "They get mad when you beat them! You enter into a fair contest with them, and if you come out ahead they're mad. It isn't fair, Mol-

lie! You as good as challenged me to catch you without your bonnet if I could!"

Mollie stared at him in surprise a moment, then gave up. "Well, keep it, then!" she said, ungraciously. She dropped upon the grass again, and began taking little turkeys out of a coop.

Joey stared hard at the uncovered head. There was no particular perfection about the features, but the wild-rose freshness of the complexion would have beautified any face. The ears and neck were soft and white, the hair bright brown. Joey's hair was called brown, too—drab, mouse-colored locks, like all the Madisons had. But this girl's hair was light and bright and streaked with yellow and inclined to curl. As for the eyes, they had the same healthy clearness that they had always appeared to have in the sunbonnet.

"Mollie," said Joey, softly, "may I say what I think? May I tell you what I think about it?"

"About what?" said Mollie, pretending not to know.

"About your looks with your sunbonnet off," said Joey.

"No," said Mollie, promptly.

But after all she was only a girl, and could not help wanting to know what Joey thought of her looks. "I guess you may tell me, too," she said, after awhile.

"All right," said Joey. "Mollie, I always notice beautiful things—gook-looking girls included, and I've seen a good many of 'em, or thought I had; but, Mollie, I didn't know there were any so altogether glorious as you are!"

Mollie must have expected a compliment, but this was so extravagant. "How silly to say so much!" she said.

Joey paid no attention to this. "But, Mollie," he continued, "I don't say but what you've got some faults outside your looks."

Mollie looked up quickly. "Where?" she said. "Your disposition," said Joey. "You're not kind to people. I don't mean to me in particular, but to everybody you're not kind and pitying enough."

A look of impatience appeared on her face. "You've said that before," she said. "You're always hinting it, and it isn't true; I am kind to people. I don't flatter and talk sweet, maybe, but in a practical way I do more for them than one of these girls that's always pleasing and loving and coaxing. Yes, I know I do! I work hard for my folks. Grandmother and grandfather and Aunt Kate and the little girls—they'd have no home at all if it wasn't for me—" Here a sudden rush of tears came to her eyes. This embarrassed her greatly for a moment. Then she looked up fiercely through them. "It isn't fair to tell me I'm not kind, and talk as if other girls were all right. I am kind. I don't have to make a good home for them all here and keep them comfortable, and happy. But I do it, and I enjoy it, and I'm going to keep on as long as the old people live, and as long as the little girls need it. If that isn't being kind I don't know what is!"

Joey listened with profound attention to this fierce speech. "Mollie," said he, earnestly, "I knew you were doing all this, or something like it. I knew you were worth about a dozen of the common run. That's why I said you had a fault. If you were another girl I'd never noticed it or spoke of it, because there'd be nothing but faults. But you're too—too—too near perfection, Mollie! That's why I can't help wanting you to be more kind and sweet in your ways, as well as so genuine in the practical way. It isn't because I'm any account myself that I'm preaching so, but I just can't help wanting you to be as I said. And you will try, won't you, Mollie?" he concluded, with his winning smile.

All this should have greatly mollified her, and perhaps she was more appeased than she allowed herself to seem. "I'll think about it," she said, rather sulkily.

At this moment a comfortable-looking, elderly woman stepped out on the side porch of the house. "Mollie! Mollie!" she called. "Little Maggie's crying for you again! I can't do anything with her!"

"There, Aunt Kate wants me!" said Mollie. "I must go in. Little Maggie has been sick to-day."

"We part good friends?" said Joey, holding out his hand.

"Yes," said Mollie, with downcast eyes, as she gave him her hand.

Out in the road again Joey went on toward the blacksmith-shop. It was too late to get his bolt welded now, the shop would be shut. But Joey was too preoccupied to think of this, and he went on down the road. The sun had set, but the sky in the west was lemon-colored. The landscape was green yet, it being the first week in June, but there were many different shades of green. There was the light green of the oat-fields, the strong green of the corn-fields, the rich green of the pastures and the dark, deep green of the hedge-rows. The dusty path up the middle of the road was gray. On either side of it was turf sprinkled with dandelions which had gone to seed. Then from the different farm-yards round came different sounds. In one grove nearly a mile away a bell tolled for quitting-time; from another came the sound of lambs and sheep bleating wildly over some separating that was being done among them; from the direction of still another grove could be heard the gobbling of a turkey and the bawling of calves who knew it was milking-time. Altogether it was a very pleasant hour of the day—pleasant to both eye and ear. But for once Joey was too absorbed to notice these things—absorbed because he had seen Mollie with tears in her eyes and because he had had a glimpse into her heart.

CHAPTER III.

The first week of June there was a church sociable at the Grahams'. Old and young alike attended these gatherings, and there was a big crowd out at the Grahams'. Refreshments, which consisted of strawberries and cake, were served on the lawn. Over here lanterns were hung in the trees, and long-

handled torches were stuck in the ground here and there. Around them young people scampered and played games and talked and laughed and whispered, while the older people, regardless of dew and night air, took their enjoyment in the house.

Mollie Gordon was at this sociable. It was her first appearance since the coming of the family to the neighborhood. Aunt Kate and the little girls had been out—even the old grandparents had appeared at church, but Mollie had been nowhere. She made no effort to-night to get acquainted with the young people, but stayed with Mrs. Graham, who was her aunt, and with the older people who had known her mother many years ago. However, she attracted much attention. She did not try in the least to make people notice her, but every one had heard of the girl who had bought the old Frazier place; they had heard about her riding the stalk-cutter and the corn-planter, and they had seen the splendid change in the old Frazier place. Then Mollie was very beautiful to-night. This made them notice her. She wore a white dress, and her hair was done up in simple fashion. Her wild-rose complexion showed off splendidly; her eyes were never more clear and dewy, while her expression, though sober, was straightforward and guileless. Then Mollie's figure, as she moved about among the other women, was as erect as a young poplar. The people at the sociable stared at her, asked who she was, and whispered to each other about her. One middle-aged man crossed the room and shook hands with her.

"My name is Jed Barker," he said, "and I want to shake hands with you. I've heard about how you can run a farm and work in the field, and I've seen how the old Frazier place looks since you got it. Girls ain't what they used to be, but I've an idea you ain't much behind any that ever was."

Mollie smiled with real pleasure in answer to this praise; then lank old Jed Barker, having said his say, was satisfied and went away.

As for Joey, when he arrived at the sociable to-night the first thing he did was to look for Mollie. When he found her he stood still some distance away, and looked at her for a full minute. He had never seen her "fixed up" before. "I knew she'd heat everything else all hollow if she fixed up!" he thought. "I knew it! I knew how she'd look!" Then he went over to shake hands with her.

But Joey was fated to go through a good deal before he got to shake hands with Mollie that night. When she saw him coming just now she immediately moved away, whether purposely or not he could not tell. He approached her again, with the same result. He then suspected something was wrong. However, he got her in a corner at last, and said, "Good-evening, Mollie!" She made no reply to this greeting at all, but giving him a look of hot anger, said, "Let me pass!"

"What's the matter, Mollie?" asked Joey, profoundly astonished.

She made no answer, but went on. Joey was greatly puzzled and distressed. What had happened? The last time he had been with her she had been friendly enough. What had happened since then, or what had she heard to make her act so? He was not frightened, but began keenly watching for a chance of seeing her alone. This came. Her aunt took her out to a bench in the back yard to help pick over strawberries. After they had been at work a few minutes some one called Mrs. Graham away. The moment she was gone Joey stood in front of her.

"What have I done, Mollie?" he said.

Mollie immediately put down her crock of strawberries, and started to go away. "I don't want to talk to you!" she said.

"Then you're very unjust!" said Joey, firmly. "You're afraid to stand up and tell me what I've done or let me make it right. You're unjust!"

This arrested Mollie very promptly. "How dare you say that to me!" she said, looking at him, flushed and panting.

"What have I done, Mollie?" he asked again.

She dropped her eyes and considered a moment. "You—you've been talking about me," she said, at last.

"I bave not!" said Joey, flatly.

She gazed into his face doubtfully a moment, then getting somewhat embarrassed, began: "You said—I heard that you said that I—that I—had no business to work in the field; that no nice girl would do it; that you had no use for female farmers, and that if your women-folks did as I did you'd tie them up! There! did you say all that about me, now, or did you not?" she demanded.

She was looking straight at him now, with challenge in her eyes. Joey hesitated woefully. He remembered that ill-starred conversation with the McFarlan boys. He never wanted to lie so badly in his life. But Joey had had a good "bringing-up," and in hard moments like this it is the good "bringing-up" that tells.

"Yes, Mollie," he owned, "I did say that, but it was long ago, before I ever knew you or spoke to you—"

But nothing would appease Mollie, or make her listen to him. She shut her lips tightly and was about to leave him again, but Joey caught her wrist.

"You shall listen to me, Mollie!" he said. "You shan't go away mad like that! I didn't know you then, and that does make a difference. You've got to own that it does! The McFarlan boys and I were talking across the fence, and saw you ten rods away that first day you were out cutting stalks, when I said all that idiotic stuff. It was before I ever spoke to you. If you think I've been pretending to be your friend all this time, and then talking about you behind your back, why, you take me to be a lots meaner fellow than I am; that's all!"

Then Mollie stood up and gave him a little lecture. The only light they had was that of a smoky lantern on the pump-handle, but it did not take a bright light to let him see her eyes blaze or to show him how beautiful she was.

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"It may make some difference—your not saying it since we got to be friends," she began, "but I hate you anyway! I hate any one that thinks that way about women working outdoors, and I hate people that call me a female farmer—I hate them! It's mean to call me so, and it isn't fair. It doesn't hurt me any, and I need to work as I do, and they know it. Grandfather can't work in the fields. There's no other man in the family, and you can't keep a family and hire all the work done on fifty acres. You know this well enough—every one of you that talks so about me knows it. I suppose you would all approve of me if I had let grandfather and grandmother go to the poorhouse, and if I hadn't let Aunt Kate and the little girls have a home with me. I wouldn't have worked in the field then. I wouldn't have been a female farmer, and I suppose you'd have thought I was all right. When my father died the Grahams here came for me, and wanted me to live with them, and rent the piece of land I had—it was the land I traded for what I've got now. I could have done that. I could have let them go to the poorhouse. It would have broken grandfather's heart, and it would have killed grandmother, but I could have done it! Then when Cousin Edward died Aunt Kate had no home on earth; he was her son. She had no money. She was pretty old, to be sure, but I suppose she could have worked for her board some place, or gone out as a nurse part of the time, and starved the rest of the time. Then Esther and little Maggie, they're Aunt Kate's grandchildren. Cousin Edward was their father, and when he died the neighbors, two of them, would have each taken one and raised her and made her work hard for them, and then when they were eighteen they could get to be hired girls for somebody, I suppose."

"I could have let them go that way, Esther and little Maggie—my dear little Maggie! Then if I'd done all this I'd have got to live here at the Grahams all the time. My grandparents would be in the poorhouse—it sounds awful to say it, I know, but it's true! And Aunt Kate and the little girls would have hard lives and all sorts of surroundings, but I could be comfortable. I wouldn't be talked about then and called unladylike—I wouldn't be a 'female farmer' then!"

Mollie stopped here, having reached her climax; for, indeed, what seemed to hurt her most of all was being called a "female farmer." She was not a tireless talker and given to long speeches. She was much more given to long silences; but this subject was one which had worn a sore place on her heart, and no doubt she had suffered over all these thoughts many times before she gave vent to them to-night. However, she could not have poured out her wrath and grief to a better-hearted fellow, to a safer or truer friend, than Joey Madison.

"You're a heroine, Mollie," he said. "I always knew that. There are plenty of girls that 'ud let their relatives shift for themselves, and live as fine and easy as they could themselves, and there isn't one in a hundred that 'nd want to run a farm for 'em as you do, and there isn't one in a hundred that could do it like you if they wanted to. I ought to have been thrashed for chattering about you. Wish I had been; it would have been a lot easier to stand than all this. I was a simpleton for giving opinions about things I'd never given any thought to. Compared with you I'm only a nuisance to my family, not good enough for you to step on. And—and—and now, Mollie, when a fellow says all that about himself, and tells you you're a heroine beside, you—you ought to forgive him. You're bound to forgive him, aren't you, Mollie?"

Joey was smiling in his winning way again, and Mollie could not help unbending a little. However, she did not forgive him yet. He had to plead a long time; but Joey was an adept at this. Though he would have nothing but entire forgiveness from her, he finally got her to yield it, and they shook hands.

After this Joey, in the best of spirits, helped her pick the stems off the neglected strawberries. This done, Mollie took the fruit to the house, and Joey, rather unwillingly, was carried off by half a dozen girls to help with a game that was being started out under the maple-trees.

Mollie was a very self-reliant young woman. She was independent and sensible and not disposed to depend on her friends for her happiness. However, to-night I think she must have been glad to be friends with Joey again; glad to be relieved of all that bitter resentment and anger she had been cherishing. I think she must have been glad he had pleaded for forgiveness and that she had granted it. She was not so different from other girls, but that she felt happier after that reconciliation. However, whatever her mind on the subject was, she kept her own council to-night as she moved about the kitchen with her aunt.

Once in passing the parlor door she stopped for a moment on the threshold to look in upon the people. Over on the farther side of the room she spied her Aunt Kate talking familiarly with a merry old gentleman about her own age or older. The old gentleman was white-haired and ruddy, and apparently very humorous and jolly. Aunt Kate, too, was in the best of spirits, and looked fresh and comely for her sixty-one years. These two, more than any one else in the room, seemed to be enjoying themselves.

"How Aunt Kate does laugh and talk and carry on!" thought Mollie. "You'd think she had known him all her life! That's just like Aunt Kate!" And Mollie, like a wise matron looking after a young girl, decided she would speak to Aunt Kate about this when they should get home.

But just then the old gentleman spied Mollie standing in the doorway. He made some remark to Aunt Kate, then crossed the room to Mollie. He shook hands with her and kissed her, and told her he had known her mother when she was a little girl, and that her Aunt Kate was an old sweetheart of his. Then he stood there talking awhile, tell-

ing her how near together his home and Aunt Kate's had been when they were children, and how their fathers' farms had joined. He gave Mollie one or two witty compliments on her beauty, made a sly jest about her getting married, then went back to Aunt Kate.

Ted Graham, who had been standing by listening and looking on and greatly enjoying Mollie's discomfiture when the old gentleman had kissed her, now leaned forward, and whispered, "Don't be so bothered about that old fellow's kissing you so, Cousin Mollie," he said. "He's a widower, I know, but he's sixty-nine!"

"Who on earth is he, Ted?" asked Mollie, turning around.

"Oh, he's all right!" said Ted. "Dandy old fellow! Owns a farm—rich! Did you ever see that new little cottage hack in the field about half way between your house and the Madisons? Yes? Well, that's where he lives. Richard Hudson's his name. He can spy out a pretty girl quicker than any young fellow in this neighborhood!"

(To be continued)

FRANCIS JOSEPH AND THE BLACKSMITH

Quite recently, while holding court at the royal palace upon the Buda Hill, overlooking the Danube, Francis Joseph received in audience a Magyar blacksmith named Kovacs Janos, who desired to thank his king for the decoration conferred on him in recognition of his having invented an agricultural machine. During the audience the blacksmith drew from his pocket two photographs, representing the king and queen, and said, handing them to his majesty, "May I ask your majesty and also the queen for your signatures?"

"And why?" demanded the king, smilingly.

"Well, you see, when I die the cross of merit which your majesty has given me will have to be returned, and my children will at least have your majesties' portraits and signatures in remembrance of this audience."

"The queen is absent from Hungary," said the king, "and, besides, I cannot give you my signature at the present moment for I have neither pen nor pencil within reach."

"I have brought a pencil with me," said the smith, handing the monarch the article in question. The king thereupon attached his signature to the photograph, and dismissed the smith with a smile and his customary inclination of the head. To the king's surprise the smith made no attempt to retire, but stood his ground.

"Is there anything else I can do for you?" asked the monarch.

"Yes, your majesty; I am waiting for my pencil."

This the king had mechanically pocketed, and he returned it, with a hearty laugh.—Chicago Record.

RECENT PUBLICATIONS

CATALOGUES RECEIVED

Bateman Mfg. Co., Grenloch, N. J. Illustrated pamphlet describing the "Iron Age" farm and garden implements.

The Johnston Harvester Co., Batavia, N. Y. Illustrated catalogue of grain, hay and corn harvesting machinery, disk implements and sugar-beet machinery.

F. B. Mills, Rose Hill, N. Y. Mills' seed catalogue for 1899. Numerous cash prizes offered.

The Animal Trap Co., Abingdon, Ill. Illustrated leaflet of "Out o' Sight" mole, mouse and rat traps.

Wm. C. Babcock, Bridgman, Mich. Descriptive catalogue and price-list of the Hillside nursery and fruit-farm.

Elgin-American Manufacturing Co., Elgin, Ill. Illustrated catalogue of quick-selling silver-plated ware—knives, forks, spoons, pitchers, teapots, etc.

The Standard Sewing Machine Co., Cleveland, Ohio. Handsomely illustrated souvenir giving glimpses of their plant and beautiful views of Cleveland. Price twenty-five cents.

The Initial Toe Pad Co., Three Rivers, Mich. Illustrated catalogue of carriage trimmings. Complete line. "Best value for the money."

Des Moines Incubator Co., Des Moines, Iowa. Illustrated catalogue of incubators and brooders containing much useful information on raising poultry.

The Cyphers Incubator Co., Wayland, N. Y. The Cyphers incubator catalogue and guide to poultry culture. A handsomely illustrated pamphlet of 136 pages, teaching the art of incubation and giving valuable instructions in poultry-raising. Price ten cents.

The De Laval Separator Co., 74 Cortlandt St., New York. Booklet—Proofs that the "Alpha-Baby" is all right.

BOOKS NOTICED

BIGGLE SWINE BOOK: Much Old and More New Hog Knowledge, Arranged in Alternate Streaks of Fat and Lean. By Jacob Biggle. Fully illustrated. Price fifty cents. Published by Wilmer Atkinson Co., Philadelphia, Pa.

FERTILIZERS: The Source, Character and Composition of Natural, Home-made and Manufactured Fertilizers, and Suggestions as to Their Use for Different Crops and Conditions. By Edward B. Voorhees. Cloth-bound, 335 pages. Price one dollar. The Macmillan Co., 66 Fifth Ave., New York.

THE SCOTTISH TERRIER AND THE IRISH TERRIER: Their History, Characteristics and Development to the Present Standard, etc. Compiled and published by James E. Green, West Medford, Mass.



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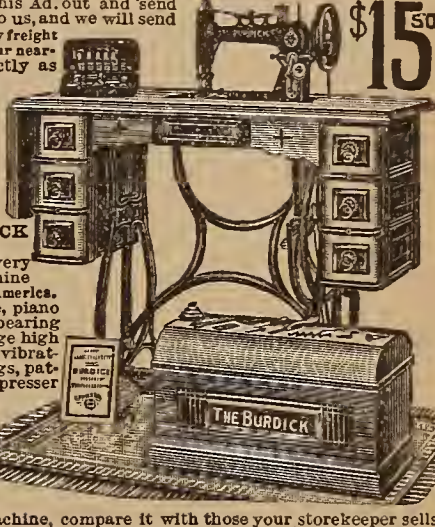
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SMILES



BAMBOOZLING GRANDMA

"There never was a grandma half so good!"
He whispered while beside her chair he stood,
And laid his rosy cheek,
With manner very meek,
Against her dear old face in loving mood.

"There never was a nicer grandma born;
I know some little boys must be forlorn,
Because they've none like you.
I wonder what I'd do
Without a grandma's kisses night and morn?"

"There never was a dearer grandma; there!"
He kissed her and he smoothed her snow-white hair;
Then fixed her ruffled cap,
And nestled in her lap,
While grandma, smiling, rocked her old arm-chair.

"When I'm a man what things to you I'll bring:
A horse and carriage, and a watch and ring.
All grandmas are so nice
(Just here he kissed her twice).
And grandmas give a good boy everything."

Before his dear old grandma could reply
This boy looked up, and with a roguish eye
Then whispered in her ear,
That nobody might hear:
"Say, grandma, have you any more mince pie?"
—Nebraska State Journal.

THE FOLLY OF POLITENESS

MADAME," he said, arising and offering the elderly woman with the basket his seat, "won't you sit down?"
Just then the cable-car went around a curve; the woman fell into his arms, spattered about three quarts of apple-butter all over his new \$35 overcoat, and broke a dozen eggs in the lap of a man sitting near the door.

After they had got straightened out, she exclaimed:

"If some people wasn't always trying to look after everybody else's business there would be a heap less trouble in the world."

He would have said something in reply, but the man who had stopped the eggs wanted to fight, so he walked out to the rear platform, and said to the conductor:

"I wouldn't care a cuss, only I'll have to explain to my wife where that apple butter came from, and I know blamed well she won't believe a word of it. I tell you, the man who goes through the world trying to do good unto others is a fool of greater displacement than a first-class warship."—Cleveland Leader.

AN ATTACK OF INSPIRATION

"Is your sister at home?" asked the spruce young man at the door.

"Yes," answered the terrible little brother, "but you had better not come in. Jest make a sneak and I won't say nothin' to her. Say, she's writin' a Chris'mus story. Her hair is tangled, her skirt sags in the back, she ain't got no collar on, and she's wearin' her crooked-heeled shoes without lacin' 'em. She throwed me out ten minutes ago, and then had the nerve to tell mother that I broke her all up. 'Course it don't make no difference to me, but if I was you I'd never let on I'd been here at all. She's got the all-fired temper when she's writin' Chris'mus stories ever you saw!"

Then the young man recaptured his card, tipped off the veranda and was around the corner by the time the impish brother was doing a waltz on the best carpet in the house.—Detroit Free Press.

SAVED HIS LIFE

Some of the British troops in the Irish rebellion did not fight particularly well. A certain general at a lord lieutenant's party in Dublin was admonishing a begging woman to leave the place, when she said:

"It is I that am proud to see your honor here in the red coat you wore the very day when you saved the life of my little boy, Mickie."

"Indeed," replied the general, not sorry to hear anything to his credit on such a distinguished occasion. "I had forgotten all about it. How did I save his life?"

"Why, your honor, when the battle was at its hottest your honor was the first to run, and when me little Mickie saw the general run he ran, too, the Lord be praised."—The Interior.

MR. DOOLEY'S WHISKY PHILOSOPHY

According to Mr. Dooley's present idea, whisky is the standard of value: "It niver fluctuates; an' that's funny, too, seein' that so much iv it goes down. It was th' same price—15 cints a slug, two fr a quather—durin' th' war; and it was th' same price afther th' war. Th' day before th' crime of sivilty-three it was worth fifteen cints; it was th' same th' day afther. Goold and silver fluctuates, an' wan day, down another, but whisky stands firm an' strong, unchangeable as th' skies, immovable as a rock, at fifteen or two fr a quather."

GIVE A DOG A BAD NAME

Mr. William Smith is noted for his jollity and also for keeping late hours. As a rule he gets home about 2 o'clock in the morning. One evening, however, in a fit of repentance, Mr. Smith decided to go home early and gladden the heart of his lonely wife.

Accordingly he presented himself at the door of his residence soon after 11 P. M., and gave a bold double knock. To his wife's question of "Who's there?" he confidently replied, "William."

"Now, look here," cried Mrs. S., indignantly, "none of that. My man William won't be home for three hours at least, and if you don't clear out at once I'll call the police."

And William heard the grating of the key in the lock and the rattle of the chain and meekly concluded that reforming was not in his line.—Pearson's Weekly.

A SCOTCH OPINION OF SOLOMON

The following incident happened at one of the "catecheesms" which are held periodically in Scotland for all the members of the kirk of a certain district.

The lesson was in Ecclesiastes, and one day they were discussing the verse in which Solomon says: "One man among a thousand have I found; but a woman among all those have I not found," meaning one just and good and upright. An old Scotch woman, when she had listened in silence and heard the rest accept it as present and gospel truth, rose to her feet.

"Hoot!" she said, indignantly, her eyes blazing. "Do you find why that was? It was because nae decent woman wad be seen in his company."—Christian Endeavor World.

LIBEL ON A FIRST-CLASS HOTEL

A Caribon man lately wandered into a remote hotel that doesn't keep a dictionary, and on coming down in the morning was asked by the landlord how he rested.

"Oh," replied the gentleman, "I sniffered nearly all night from insomnia."

The landlord was mad in a minute, and roared, "I'll bet you \$2 there ain't one in my house."—Daily Kansas Journal.

THEN HE WAS AHEAD

Elderly passenger—"Here, Miss, take this seat."

Stout young woman—"Oh, I could not think of depriving an old—I mean I could not think of depriving you."

Elderly passenger—"You go ahead and take it, and don't argue. I know you girls always has lame feet."—Indianapolis Journal.

THEN HE HAD HER

"And then," the fair maiden went on with her narration, "I covered my face with my hands and wept."

"Impossible!" ejaculated the young man. "You could not cover your face with those small hands."

And she was his from that day forward, and they lived happily ever after.—Detroit Free Press.

THE NEW REPORTER'S FIRST EFFORT

A man killed a dog belonging to another man. The son of the man whose dog was killed proceeded to whip the man who killed the dog of the man he was the son of. The man who was the son of the man whose dog was killed was arrested on complaint of the man who was assaulted by the son of the man whose dog the man who was assaulted had killed.—Chicago News.

SKELETON SCARED HIM

A tramp called on a doctor one day for alms. In leaving the doctor's office he opened the wrong door—that of a closet with a skeleton in it. He fled in terror. The doctor rushed to the street door and asked the man what was the matter. The tramp replied:

"I know yer, if yer have got yer clothes on."

AN ADVERTISEMENT

"Three rooms in a convenient farm-house, where two cows could also be pastured," are advertised for in a Boston paper. We knew Massachusetts was a slow old state, but we didn't suppose grass grew on the floor of her houses, as well as in the streets of her towns.—St. Paul Pioneer Press.

He has not fought an armed foe,
Nor hunted the north pole;
His name will never be inscribed
On fame's great honor roll;
Yet noble is the deed he does,
Heroic he who dares it,
His wife at Christmas made for him
A necktie, and he wears it.

COLD DANGER

CONSUMPTION BEGINS WITH LUNG WEAKNESS

There is Death in the Air for Those with Weak Lungs Who Brave the Dangers of Cold Weather

Weak Lungs Made Strong and Proof Against Danger by the New Scientific Slocum Treatment for Coughs, Catarrh, Consumption and Diseases of the Respiratory Organs

A New Treatment that Cures Consumption and a Chance for You to Test It Free

The cold weather has brought its usual crop of catarrh, coughs, sore throats, etc., etc. It means death to thousands.

For these disorders are but forerunners of death-dealing consumption.

Doctor Slocum's new treatment for this terrible disease is a lifeboat of hope for those in despair.

It is a new scientific system of medicine, the result of modern medical discoveries, a positive and absolute annihilator of the deadly consumption germ.

The system consists of three remedies which act simultaneously and supplement each other's curative action.

The Doctor Slocum system has brought health to thousands who were weak, sickly, pale, thin, and therefore open to consumption infection, if not infected.

It has cured dangerous throat and lung

troubles, which the sufferers thought were proof against medicine.

It is the cold weather antidote.

What it has done is a proof of what it will do—for you—if you'll let it.

It is simple and effective; easy and pleasant to take.

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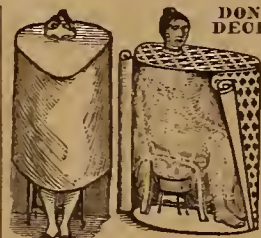
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Merely send your name and full address to Dr. T. A. Slocum, 98 Pine Street, New York, when the three free bottles will be sent you. Kindly mention FARM AND FIRESIDE, when writing the Doctor.



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Between our cabinet and other makes? These cuts speak plainer than words. Our New 1900 Style Quaker Folding Bath Cabinet has a Door, has a self-supporting steel frame, galvanized, covering of antiseptic, hygienic cloth, rubber lined. Cabinet does not rest on the shoulders, nor pull over your head. No rodwork to scarp. To operate, simply open door, step in, bathe, cool off, step out. Only perfect Cabinet made. Folded, it is 3 inches thick, 15 inches wide, 16 inches long, weighs only 5 pounds. Patented. \$26,000 Sold. Recommended by Best Physicians for bathing purposes. It opens the pores, sweats out the poisons, makes you clean, strong, vigorous and healthy. Cures bad cold with one bath. Cures rheumatism, lagrippe, insomnia, obesity, female troubles, all blood, skin, nerve and kidney diseases. Immediate relief guaranteed in worst cases. Cabinet, Frame, Store, Formulas and Directions sent anywhere upon receipt of \$5.00. Face steaming attachment \$1.00 extra. Order to-day. You won't be disappointed. We are responsible. Capital \$200,000.00. Largest manufacturers of Bath Cabinets in the world. Write us anyway. Our Valuable Descriptive FREE Book, Testimonials, Etc., \$100.00 A MONTH AND EXPENSES. Address E. T. WORLD MANUFACTURING CO., Cincinnati, Ohio.



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If You Want a Good Appetite and Perfect Digestion

After each meal dissolve one or two of Stuart's Dyspepsia Tablets in the mouth and, mingling with the food, they constitute a perfect digestive, absolutely safe for the most sensitive stomach.

They digest the food *before it has time to ferment*, thus preventing the formation of gas and keeping the blood pure and free from the poisonous products of fermented, half-digested food.

Stuart's Dyspepsia Tablets make the complexion clear by keeping the blood pure.

They increase flesh by digesting flesh-forming foods.

Stuart's Dyspepsia Tablets is the only remedy designed especially for the cure of stomach troubles and nothing else.

One disease, one remedy, the successful physician of to-day is the specialist, the successful medicine is the medicine prepared especially for one disease.

A whole package taken at one time would not hurt you, but would simply be a waste of good material.

Over six thousand men and women in the state of Michigan alone have been cured of indigestion and dyspepsia by the use of Stuart's Dyspepsia Tablets.

Sold by all druggists at 50 cents per package. Send for Free Book on stomach diseases to F. A. Stuart Co., Marshall, Mich.

CADET GRANT'S SELF-CONTROL

Even when a cadet General Grant was as free from agitation in an emergency as that self-possessed woman of whom Alexander Pope wrote, "And mistress of herself though china fall." An amusing story, told by a classmate at West Point, displays his imperturbable gravity under the most trying circumstances:

"One morning, when our squad was marching to the academic hall to recite, Frank Gardner produced an old silver watch that was apparently about four inches in diameter. It was passed along from one cadet to another to look at, and when we arrived at the section-room door it was in the hands of Grant. He could hide it or carry it only by putting it in the breast of his coat.

"When the section was seated, Zealous B. Tower, who had that day heard the recitation, sent Grant and three other cadets to the blackboards. The weather was mild, and the door open. When Grant had turned from the board and had begun to demonstrate, suddenly a sound resembling a buzz-saw and a Chinese gong burst forth and drowned all proceedings. In the uproar we all laughed aloud with impunity.

"Shut that door!" cried Tower, and that only made matters worse. Fast and furious went the buzz-saw, and louder went the gong. Bang! went something. The noise stopped.

"While all this rattling din was going on Grant looked as innocent as a lamb, and in the profound silence that followed he began: "And as I was going to remark, if we subtract equation E from equation A we have," etc.

"I mention this to show how he could conceal his emotions, for it was that alarm-watch in his bosom that caused all the commotion. It had been set to go off, and it did go off!"—Youth's Companion.

THE INVENTION OF THE TELESCOPE

One day, nearly three hundred years ago, a poor optician was working in his shop in the town of Middleburg, in the Netherlands, his children helping him or amusing themselves with the tools and objects lying about, when suddenly his little girl exclaimed, "Oh, papa, see how near the steeple comes!"

Anxious to learn the cause of the child's amazement, he turned toward her and saw that she was looking through two lenses—one held close to her eye, the other at arm's length; and calling her to his side he noticed that the eye-lens was plano-concave, while the other was plano-convex. Taking the two glasses he repeated his daughter's experiment and soon discovered that she had chanced to hold the lenses at the proper focus, thus producing the wonderful effect that she observed. His quick wit saw in this a wonderful discovery, and he at once set about making use of his new knowledge of lenses. Ere long he had fashioned a tube of pasteboard, in which he set the glasses at their proper focus; and so the telescope was invented.—Chambers' Journal.

TO CURE CREAKY BOOTS

"Cheap shoes are not necessarily of poor material," said a shoe-store clerk. "Creaking often accounts for the low price. Cheap double-soled shoes nearly always creak, and the reason is that the two soles do not quite fit or one is of more pliable material than the other, so that they rub against each other. Among the remedies usually tried is soaking the shoe in water or oil. This is effective for a time, but the cure is only temporary. The creak invariably returns in a few days. However, there is one certain and simple remedy. It is to drive three little wooden pegs into the sole. The pegs prevent the friction of the soles. Any cobbler will do it for you for ten cents, and so not only restore your own peace of mind, but also that of your friends."—New York Sun.

"THE DIVINE COMEDY" FROM MEMORY

A Neapolitan professor has just performed a remarkable feat. Some time ago he offered to make a bet that he could recite the whole of Dante's "Divine Comedy" by heart. His ability to do this was doubted, and his wager was taken up. A select audience was invited to hear the professor, who declaimed from eight o'clock in the evening until two o'clock the next afternoon. The reciter stopped occasionally, but not because he had forgotten the poem; it was simply to moisten his tongue with sugared water. He won his wager, for the audience had to confess that he got through the 15,000 verses, more or less, of which the poem is composed, without the least difficulty.—London Globe.

WHEATLET

is the prince of good foods—

It is Made for Health NOT FOR LOOKS.

It is the food that thoughtful minds have been waiting for. It is all food—comprising the gluten and phosphates of whole wheat discarding all woody and fibrous bran. You can depend upon its cleanliness.

Our booklet, mailed free on request, explains and illustrates the remarkable food properties of Entire Wheat properly milled. Send for it.

If your grocer does not keep Wheatlet have him order some for you, or send us his name and your order—we will see that you are supplied. Avoid substitutes.

The genuine is sold in 2 lb. packages and is made only by the

Franklin Mills Co., Lockport, N. Y.

PRICE
\$2.95.



OUR 1899 MACKINTOSH

SEND NO MONEY, cut this ad out and send to us, state your height and weight, bust measure, length of garment from collar down back to waist line, and waist line to bottom of skirt; state color wanted and we will send you this Mackintosh by express C. O. D., subject to examination; examine and try it on at your nearest express office and if found exactly as represented and by far the greatest value you ever saw or heard of, pay your express agent our SPECIAL OFFER PRICE, \$2.95, and express charges.

THIS MACKINTOSH is made of BLUE genuine Rainley double texture WATERPROOF SERGE CLOTH, with fancy plaid lining, velvet collar, double detachable cape, extra full sweep cape and skirt, guaranteed latest style and finest tailor-made.

For Free Cloth Samples of every thing in Ladies' Mackintoshes. Write for Free Sample Book No. 85C.

SEARS, ROEBUCK & CO. (Inc.), Chicago, Ills.

RUPTURE Sure Cure at home; at a small cost. No operation, pain, danger or detention from work. No return of Rupture or further use for Trusses. A complete, radical cure to all (old or young). Easy to use; thousands cured; book free (sealed). DR. W. S. RICE, Box F, Adams, New York.

CANVASSERS COIN CASH in working for me. Ladies and gentlemen, this is your great opportunity. OUT-FIT FREE. Are you ready? Workers write at once to E. HANNAFORD, Springfield, Ohio.

PILES Absolutely cured. Never to return. A Boon to Sufferers. Acts like Magic. Trial box MAILED FREE. Address, Dr. E. M. BOTOT, Augusta, Maine.

Gold Pens Free...

Either one of these pens given FREE for a club of FIVE yearly subscribers to Farm and Fireside.

The Pearl Pen

Has a pearl handle, a gold nose and solid gold pen. Length 6½ inches. Sells in stores for \$1.50.

The Fountain-pen

Is same as those sold in stores for \$2.00. Has solid 14k gold pen, black rubber holder. Guaranteed to be a perfect writer. Pointed cap fits over pen when not in use. Has a filler and box. Length 7 inches.

We will send Farm and Fireside one year and either one of these Pens \$1

(When this offer is accepted the name may be counted in a club.)

Both pens guaranteed to give entire satisfaction or money refunded.

Address FARM AND FIRESIDE, Springfield, Ohio

PREMIUM No. 155

Farm and Fireside GIANT ALMANAC FOR 1899

AN AUTHORITY

On Political, Agricultural, Commercial, Educational, Financial, Mining, Religious, Historical, Official, Astronomical, and Miscellaneous Subjects and Statistics in General.

UP TO DATE 500 PAGES

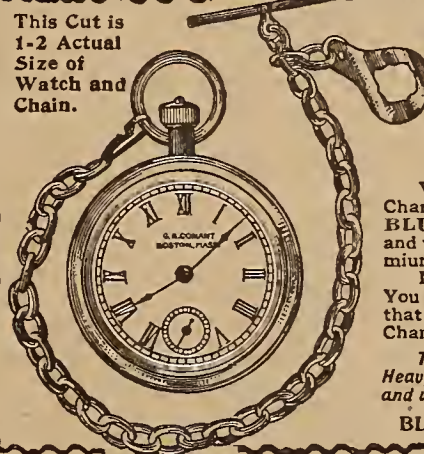
Miniature cut of the Almanac. Actual size of each page, 5½x8½ inches.

We will Send Farm and Fireside One Year and Our Giant Almanac for... 40c.

We Give the Almanac Free for a Club of Two.

Address FARM AND FIRESIDE, Springfield, Ohio

This Cut is
1-2 Actual
Size of
Watch and
Chain.



Watch and Chain FOR ONE DAY'S WORK.

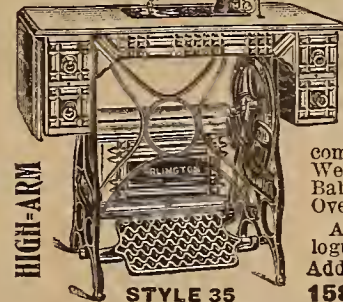
We send this Nickel-Plated Watch, also a Chain and Charm to Boys and Girls for selling 1½ dozen packages of BLUINE at 10c. each. Send your full address by return mail and we will forward the Bluine, postpaid, and a large Premium List.

No money required. We send the Bluine at our own risk. You go among your neighbors and sell it. Send us the money that you get for it and we send you the Watch, Chain and Charm, prepaid.

This is an American Watch, Nickel-Plated Case, Open Face, Heavy Bevelled Crystal. It is guaranteed to keep accurate time, and with proper care should last ten years.

BLUINE CO., 392 CONCORD JUNCTION, MASS.

\$14.50



30 Days Free Trial

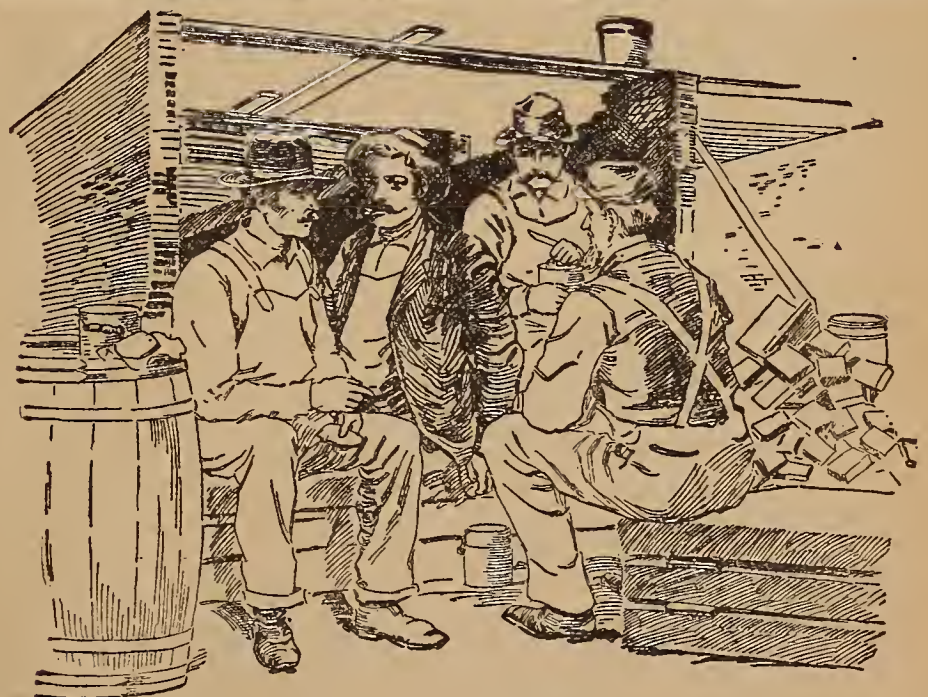
IN YOUR OWN HOME. NO MONEY REQUIRED IN ADVANCE. Buy direct from factory and save \$10.00 to \$25.00. Don't pay agents and dealers large profits.

\$45 Arlington Sewing Machine, high-arm \$14.50
\$35 " " " " \$12.50

These machines have all the latest improvements light running, noiseless; adapted for light or heavy work, self threading shuttle, self-setting needle, automatic bobbin winder and complete set of best attachments free. 10 Years written warranty. We are headquarters and have all makes and kinds in stock from Baby Machines at 95 cents to the best high arm.

Over 50 different styles including machines as low as \$8.00. A first class high-arm machine at \$9.25. Large illustrated catalogue and testimonials free. Write today for special freight offer.

Address (in full) CASH BUYERS' UNION, 158-164 W. VanBuren St., Dept. B-7 Chicago, Ills.



A joiner and builder of Karoma, Oklahoma, who was employed in building a schoolhouse at that place, related the following narrative to his fellow workmen one day during noon hour, while they were eating dinner: "Before I came to Oklahoma, I used to live in Chicago. I worked at the bricklayer trade and was troubled with dyspepsia a great deal. My head ached terribly at times, and I durst not eat raw vegetables of any kind. I tried all kinds of medicine with no effect. My case grew rapidly worse; I had to quit work. One day an old friend of mine visited me and asked me what kind of medicine I was taking. I named a whole list of medicines that had been prescribed for me, all having little or no effect. 'John,' said he, 'try Ripans Tabules. You can get them at the corner drug store.' I sent my little boy to the store and told him to get me some. He soon came back with them and I commenced to use them. Before I had used half of the box, I began to get better, and when I had used it all, I was well and went to work again. Since then I have always kept them in the house. And if you will come to my house," he said, turning to a man who had complained of headache, "I will give you a medicine that you will have faith in."

A new style packet containing TEN RIPANS TABULES in a paper carton (without glass) is now for sale at some drug stores—FOR FIVE CENTS. This low-priced sort is intended for the poor and the economical. One dozen of the five-cent cartons (120 tabules) can be had by mail by sending forty-eight cents to the RIPANS CHEMICAL COMPANY, No. 10 Spruce Street, New York—or a single carton (TEN TABULES) will be sent for five cents.

Instructions to Club-raisers and Subscribers

Any one can be a club-raiser, and every one ought to be, since our terms are so very liberal and our rewards so generous. No one should renew without at least sending one other name, which would make a club of two, entitling the club-raiser to his choice of any one of the premiums given free for a club of two. Let us illustrate how easy it is to get up a club of two: A and B are neighbors. If A sends B's subscription to FARM AND FIRESIDE with his own, at 30 cents each, it makes a club of two, which entitles A (the club-raiser) to his choice of any one of the premiums given free for a club of two; as, the Set of Six Silver-plated Nut-picks.

Now, if a member of a club wants a premium he has the right to order it in connection with his subscription, and the name can be counted in a club just the same. To illustrate: If, in the above case, A takes the new book, "Photographic Panorama of Our New Possessions," with his subscription, he pays 40 cents; if B takes "Gleason's Horse Book" with his subscription, he pays 35 cents. This makes a club of two subscribers. Thus, B gets "Gleason's Horse Book" as a premium because he pays for it, A gets the book, "Photographic Panorama of Our New Possessions," because he pays for it, and, in addition, A gets the Set of Nut-picks

free as a reward for getting up the club of two; and so on for other premiums and larger clubs.

CLUB-RAISER'S OUTFIT FREE

We want to send to every one our complete Club-raiser's Outfit, including "Instructions How to Get Up Clubs." Please write for it. It is free to all. Club-raisers should send on the subscriptions and money as fast as they take orders, and the number sent each time will be added to their list. But always say, "Add to my club list." Club-raisers may choose their premiums when their list is completed.

Below are listed a number of premiums which have been fully advertised in recent numbers of the Farm and Fireside. Any of the following offers may be accepted and the name can be counted in a club.

- Model Steam-engine, and Farm and Fireside 1 Year, = \$1.75
This Engine given free for a club of 10 yearly subscribers to Farm and Fireside; or for a club of 5 and \$1 cash. Expressage paid by us.
- Genuine Oxford Bible, and Farm and Fireside 1 Year, = 2.25
This Bible (without patent index) given free for a club of 12 yearly subscribers to Farm and Fireside. The Bible with patent index given free for a club of 14. Name in gold for 25 cents or two extra names in the club. The finest premium Bible ever offered for such a small club.
- Scholars' School Set, and Farm and Fireside 1 Year, = .60
This Scholars' School Set given free for a club of 3 yearly subscribers to Farm and Fireside. Contains pencils, pens, etc., worth \$1 at retail.
- 6 Silver-plated Nut-picks, and Farm and Fireside 1 Year, .50
This set of Six Silver-plated Nut-picks, in cloth-lined box, given free for a club of 2 yearly subscribers to Farm and Fireside.
- Bookcase and Secretary, and Farm and Fireside 1 Year, 8.00
This handsome piece of furniture given free for a club of 40 yearly subscribers to Farm and Fireside. Durably made of polished oak. The Bookcase must be sent by freight, the charges to be paid by the receiver.
- Ladies' Seal Pocketbook, and Farm and Fireside 1 Year, 1.25
A \$2 Seal Pocketbook given free for a club of 8 yearly subscribers to Farm and Fireside. Name in gold for 25 cents or two extra names.
- Life of Lincoln, and Farm and Fireside 1 Year, = = = .45
The Life of Lincoln contains 320 pages, each page 7 inches wide and 9½ inches long, and over 150 illustrations. Heavy paper binding.
- Life of Washington, and Farm and Fireside 1 Year, = = .45
The Life of Washington contains 332 pages, each page 7 inches wide by 9½ inches long, and over 100 illustrations. Heavy paper binding.
- Samantha Among the Brethren, and Farm and Fireside 1 Year, .35
- Samantha at Saratoga, and Farm and Fireside 1 Year, .35
Both of these Samantha books were written by Josiah Allen's Wife, and are very funny. They have over 200 comic illustrations. Heavy paper binding.

- Girls' Solid Silver Watch, and Farm and Fireside 1 Year, \$5.60
This Watch given free for a club of 28 yearly subscribers to Farm and Fireside. Has seven-jeweled American movement. A beautiful chatelaine watch. For full description of this and twelve other gold and silver watches see December 1st Farm and Fireside or in Premium Catalogue.
- Fine Fountain-pen, and Farm and Fireside 1 Year, = = 1.00
This Fountain-pen given free for a club of 5 yearly subscribers to Farm and Fireside. Has 14 karat gold point and otherwise same as those sold in stores for \$2. Has chased barrel, length 7 inches, box and filler.
- Pearl-handled Gold Pen, and Farm and Fireside 1 Year, 1.00
This Pearl-handled Gold Pen given free for a club of 5 yearly subscribers to Farm and Fireside. A handsome present for a lady.
- People's Atlas, and Farm and Fireside 1 Year, = = = .40
The People's Atlas contains 128 pages, each page 11 inches wide by 14 inches long, and over 200 maps and illustrations. Heavy paper binding.
- Arts of Beauty, and Farm and Fireside 1 Year, = = .35
The Arts of Beauty is the only book written by Shirley Dare, the writer on subjects pertaining to a lady's toilet. 256 pages. Heavy paper binding.
- Giant Almanac for 1899, and Farm and Fireside 1 Year, .40
Our Giant Almanac for 1899 will contain over 500 pages, each page 6 by 8½ inches. It is a complete book of statistics up-to-date. Heavy paper binding.
- The Standard Cook Book, and Farm and Fireside 1 Year, .35
The Standard Cook Book contains 1,200 recipes, 186 illustrations, 320 pages, each page 5½ by 8 inches. Over 500,000 copies sold. Lithographed cover.
- Nickel-plated Scissors, and Farm and Fireside 1 Year, = .70
This pair of fine seven-inch Scissors given free for a club of 3 yearly subscribers to Farm and Fireside. Tempered, ground and nickel-plated.
- Boys' or Men's Pocket-knife, and Farm and Fireside 1 Year, .80
This Pocket-knife given free for a club of 5 yearly subscribers to Farm and Fireside. Brass-lined and buffalo-horn handles. Has two blades.

NEW REPEATING AIR-RIFLE



We guarantee each and every rifle to arrive safely and in perfect condition and to be as described and to give entire satisfaction or money refunded. A A A A A A A A

We here offer the new 1899 Globe Air-rifle, which has several important improvements, making it one of the best and most perfect Air-rifles ever invented. * * * * *

SHOOTS 300 TIMES....
The ammunition-chamber in the Repeater holds over 300 bullets. The Repeater is operated by pressing down a spring after each shot. The ammunition is B. B. shot, which is for sale in stores everywhere. Ten cents will buy about 1,000 bullets. Owing to its accuracy, hard shooting and the cheapness of its ammunition, this new Globe Air-rifle is popular alike with grown-up people and boys.

DESCRIPTION....
The Rifle is made of excellent material. It is 35 inches long, with nickel-plated barrel. It has a globe sight and wooden stock. It is so simply and strongly made that a bright boy can quickly take it all apart, clean, and put together again. It is a very hard shooter. It will carry a bullet over 500 feet. It is easily and quickly loaded.

Premium No. 431
A club-raiser's outfit sent free to any one who wants to get up a club.

We Will Send Farm and Fireside One Year and This Air-rifle for \$1.50
(When this offer is accepted the name may be counted in a club.)
We will send this Repeating Air-rifle Free for a Club of SIX yearly subscribers to Farm and Fireside. (See shipping directions below.)
SHIPPING DIRECTIONS The rifle must be sent by express, the charges to be paid by the receiver in each case. The express charges will be from 25 to 50 cents, according to the distance. When packed ready for shipping each rifle weighs a little less than four pounds. In ordering give your express-office address.

A Gigantic Clubbing Offer== \$4.50 Worth for \$1

Woman's Home Companion is our dollar-a-year journal. It is printed on fine paper and profusely illustrated. It gives 32 to 40 pages a month, each page 11 by 16 inches, and a new and beautiful cover every issue. Its editors and contributors are the most popular American writers; in short, it is an ideal family magazine. Magnificently illustrated. It now has over 325,000 subscribers. For free sample copy address Woman's Home Companion, Springfield, Ohio. Regular price \$1.00 a year. See trial subscription offer below.

- | | |
|--|---------------|
| PHOTOGRAPHIC PANORAMA OF OUR NEW POSSESSIONS, Cheap at | \$1.00 a copy |
| GLEASON'S HORSE BOOK, Agents' Edition Sold for | 2.00 a copy |
| FARM AND FIRESIDE, The Biggest Farm Paper, Cheap at | .50 a year |
| WOMAN'S HOME COMPANION, An Ideal Magazine, Regular Price | 1.00 a year |
| Grand total for all four, | \$4.50 |

We will send Farm and Fireside and Woman's Home Companion one year and the TWO premiums for the Special Price of \$1.00.
ALL 4 FOR ONE DOLLAR
When this offer is accepted it may be counted as ONE name in a club.

In this "All 4 for \$1" offer substitutes for the premiums named may be chosen from "People's Atlas," "Giant Almanac for 1899," "Life of Washington," "Life of Lincoln," "Universal Dictionary," "Standard Cook Book," "Samantha at Saratoga," "Samantha Among the Brethren" and "Arts of Beauty." In this "All 4 for \$1" offer no more than two premiums can be taken.

NOTE THIRTY CENTS is the clubbing price for yearly subscriptions to Farm and Fireside without a premium to the subscriber. But members of clubs may accept any of our premium offers and their names can be counted in clubs. RENEWALS and new names, including a club-raiser's own subscription, can be counted in clubs.
Postage or expressage on premiums paid by us except when otherwise specified in advertisement

Address FARM AND FIRESIDE, Springfield, Ohio

COMPETITOR HANDY WAGON FOR \$19.80

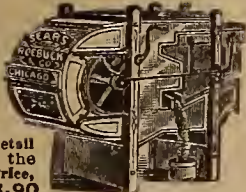
The manufacturers of the wagon shown here have introduced it to compete with the cheap low down wagons now on the market. They claim that it is better than others, first, because it is equipped with the famous Electric Steel Wheels and second, because it contains better stock throughout its entire make up.



It is made in two styles, one having wooden hounds and the other provided with iron braces instead of hounds. It is guaranteed to carry 4000 pounds anywhere. It is so reasonable in price that any farmer can afford to own one for farm hauling, for wood, stones, manure, corn fodder, hay, grain, etc. Write the Electric Wheel Co. Box 96, Quincy, Illinois, for catalogue and price list. It tells all about the Electric goods, embracing Electric Wheels, Electric Handy Wagons, Electric Feed Cookers, etc.

SEND ONE DOLLAR

Cut this ad. out and send to us and we will send you this Fanning Mill by freight, C. O. D. subject to examination. Examine at your freight depot and if found perfectly satisfactory and equal to Fanning Mills that retail at \$20.00 to \$25.00, pay the freight agent Our Special Price, \$9.90, less the \$1.00, or \$8.90 and freight charges. The mill weighs 120 pounds, and the freight will be about 10 cents for 500 miles, greater or shorter distance in proportion. **EVERY MILL IS COVERED BY A BINDING GUARANTEE;** more wind, more shako, carries more screen and will do more and better work than any mill you can buy for \$20.00. Will separate wild seed from wheat in one operation, will separate the foul seeds, such as mustard, pigeon grass, etc., from flax on once going through the mill. It is a perfect cleaner of clover and timothy. Made of the very best material. We furnish with it one wire wheat hurdle, three sieves, wheat screens, wheat grader, corn and oat sieve and barley sieve. Capacity, 90 bushels per hour. \$9.90 is our special offer price. Order at once. Write for free Agricultural Implement Catalogue. Address, SEARS, ROEBUCK & CO. (INC.) CHICAGO, ILL.



SEED DUE BILL FREE

Get new customers to test my seeds I will mail my handsome catalogue for 1899, lithographed and beautifully illustrated, and a 10c. Due Bill, good for 10c. worth of seeds for trial, absolutely free. It is full of bargains. All the Best Seeds, Bulbs, Plants, Roses, new Fruits, Farm Seeds, Potatoes, etc., at lowest prices. Ten Great Novelties offered without name. I will pay \$50. FOR NAME for each. Don't buy your stock until you see this new catalogue. Several varieties shown in color. Great inducements for orders this year. You will be surprised at my bargain offers. Send your address on Postal to-day. Tell your friends to send too. Old customers will receive a copy. F. H. MILLS, Seedsman, Box 46, Rose Hill, N. Y.

Boys & Girls

We are giving away watches, cameras, solid gold rings, sporting goods, musical instruments & many other valuable premiums to boys and girls for selling 18 packages of Royal Ink Powder at 10c each. Every package makes 50c worth of fine ink. We ask no money—send your name and address, and we will forward you 18 packages with premium list and full instructions. When you sell the Ink Powder send the money to us and select your premium. This is an honest offer. We trust you. Don't lose this grand opportunity. Write for the outfit today. Address all orders to Imperial Ink Concern, 62 Adams St. Oak Park, Ill.

THROW AWAY YOUR HAT PINS

The Ideal Hat Fastener is a perfect device for holding the hat on the head without a pin, no matter how hard the wind blows. Just the thing for cyclists, in fact, every lady, young or old. Price 25-cents, by mail. Agents wanted. IDEAL FASTENER CO., Station N, CHICAGO.

ONLY \$5.00

for this first-class cooker and water heater. Just the thing for cooking feed for stock, pigs or poultry and for heating water for scalding hogs. Burns wood only. **The Farmer's Feed Cooker** is made of best cast iron with No. 22 galvanized steel boiler, and holds 20 gallons. We make larger cookers and will quote prices on application. Send for free circulars. Reliable Inc. & Brdr. Co. Box 41, Quincy, Ill.

Dr. HAYES, ASTHMA Cured to Stay Cured
Buffalo, N. Y.

GET 256-page book about MAGIC LANTERNS FREE
Tells how to operate them—how much they cost—how to make money with small capital. Sent free on request. McALLISTER, Mfg. Optician, 49 Nassau St., New York.

WORK either sex, no canvassing, no capital required; we send Free Samples for you to investigate. No Outfits to sell you. Equitable Reporting Co., Dept. Z. D., 247 W. 125th St., N. Y.

700 Sample Styles of Silk Fringe Cards, Hidden Name Cards, Love Cards, Scrap Pictures, Games, Puzzles, Album Verses, The Star Puzzle, 13 Puzzle, and Agents Sample Album of our latest Cards. Send a 2c. stamp for postage. BANNER CARD CO., CADIZ, OHIO.

WANTED Man or lady to travel and appoint agents. Est. firm. \$50 per month and expenses to start. P. W. ZIEGLER & CO., 222 Locust St., Philadelphia.

PLAYS Dialogues, Speakers for School, Club and Parlor. Catalogue free. T. S. DENISON, Publisher, Chicago, Ill.

RUBBER GOODS For Men, Women and Children. Address, The N. C. & Rubber Mfg. Co., 147 Huron St., TOLEDO, OHIO. Catalogue Free.

Dr. ISAAC THOMPSON'S EYE WATER (Fadicated with) SORE EYES

RHEUMATISM positively cured. Trial bottle FREE. Instant relief. Send to-day. ROYAL CROWN REMEDIES, 408 Ogden Ave., Chicago.

RUBBER GOODS of every description. Cat'lg free. Edwin Mercer & Co., Toledo, O.

600 SECOND HAND BICYCLES \$5 to \$15. Bargain list free. E. F. MEAD CYCLE CO., CHICAGO.

RUPTURE Sure Cure at home. 30 Days' Treatment FREE. Dr. W. B. JEFFERS, Box K, Bishop Street, Jeff. Co., N. Y.

BED WETTING CURED. Box FREE. Missouri Remedy Co., St. Louis, Mo.

BED-WETTING CURED. Sample FREE. Dr. F. E. May, Bloomington, Ill.

INVENTORS MODELS CAT'LG FREE. J. C. SEYLL, 179 MADISON ST., CHICAGO, ILL.

ALL KINDS OF WATCHES from 95c. upward. Catalogue sent free. Safe Watch Co., P. O. Box 150, N. Y.

CARDS FOR 1899. 50 Sample Styles and List of 750 PREMIUM ARTICLES FREE. HAYFIELD PUB. CO., CADIZ, OHIO

A WOMAN AND A LAWYER

"Speaking of conscientious service on the part of a lawyer," said the citizen who came to Detroit when young, and is now past his threescore years and ten, "I want to tell you what was done by one who always stood high in the esteem of the bar, and but recently died. He had gone through college and taken his legal course with a young man who afterward settled in an interior town of Pennsylvania, where he grew wealthy by looking after the legal interests of mining and manufacturing corporations. Part of the property left his wife at his death consisted of three thousand shares of railroad stock that had cost but little, and had been given in return for professional work. The widow did not know what to do with this part of the legacy, and so she sent it to the Detroit friend of her late husband, and asked him to dispose of it on the best terms he could get.

"When the shares touched seventy he wired her that he thought it time to sell, and asked an immediate reply. Woman-like, she wrote, instead of telegraphing, and in the meantime the lawyer concluded to sell, receiving a \$210,000 check in payment. But the letter, when it arrived, told him that the writer had been informed that the stock was likely to go at par, and that she preferred to wait. The lawyer succeeded in buying the stock back. Meantime she received his letter telling what he had done on his own motion, and she at once replied that the sale was acceptable, and would he please forward the proceeds. Here was a dilemma, but the lawyer had a conscience that was as good as his friendship. He sold at sixty-seven and one half, made up the \$7,500 difference out of his own pocket, absolutely refused to accept any commission from the wife of his chum, and sent her the full \$210,000, just as though the sale at seventy had stood. The stock is now quoted at twenty-one. And yet the world has a way of laughing at the idea of honesty among lawyers."—Detroit Free Press.

ANNUAL FIRE WASTE IN UNITED STATES

Few people outside of the underwriters appreciate the extent of the business and the magnitude of the losses of fire insurance companies. The following is an extract from a recent address by a prominent manager of New York. It certainly should act as an antidote for kicking at rates and a specific for adverse legislation:

There were burned in the United States in 1897 33,033 dwellings, 913 saloons and bar-rooms and 735 churches, besides 31,098 other buildings—the total destruction being 65,779 buildings, or an average of over 172 buildings for each day in the year. It will also be seen from the above that while nearly three bar-rooms are burned every day in the year, two churches are also destroyed every day in the year.

The net premiums collected by fire insurance companies amount to the enormous sum of about \$135,000,000 per annum, but the losses during the past three years have been so heavy that after paying expenses and losses the companies have made little over two per cent as a profit on the entire business. It is said that no other business of like magnitude shows such a low ratio of profit.

It is risking too much to use haphazard remedies. In cases of Cold, see the doctor, or take the doctor's prescription—Jayne's Expectorant.

TO SUIT THE OCCASION

A little girl wrote a composition on the cow. It was very brief: "The cow is a very useful animal." The mother requested her to read it to the minister, which she did, amending it to suit the occasion, "The cow is the most useful animal, except religion."—The Transylvanian.

ARE YOU HARD OF HEARING OR DEAF? Call, or send stamp for full particulars how to restore your hearing, by one who was deaf for 30 years. John Garmore, Dept. 40, Hammond Building, Cincinnati, Ohio.

A cubic foot of newly fallen snow weighs five and one half pounds, and has twelve times the bulk of an equal weight of water.

CONSUMPTION CURED

An old physician, retired from practice, had placed in his hands by an East Indian missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Brouchitis, Catarrh, Asthma and all Throat and Lung Affections; also a positive and radical cure for Nervous Debility and all Nervous Complaints. Having tested this wonderful curative powers in thousands of cases, and desiring to relieve human suffering, I will send free of charge to all who wish it, this recipe, in German, French or English, with full directions for preparing and using. Sent by mail, by addressing, with stamp, naming this paper, W. A. NOYES, 820 Powers' Block, Rochester, N. Y.

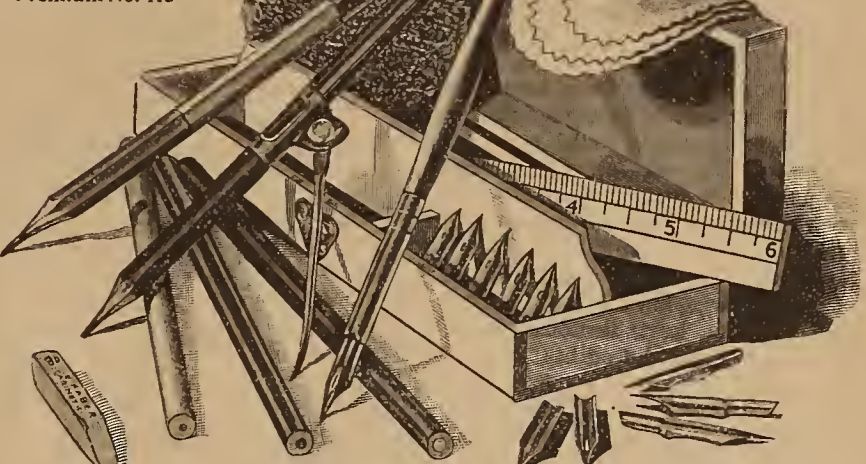
SCHOLARS' COMPANION

This Scholars' Companion consists of one polished wooden box 8 inches long, 3 inches wide, 1 1/2 inches deep, with lock-corners and brass hinges and fastener, and contains all of the articles named and shown below.

Each Scholars' Companion contains every one of the 23 articles named and shown here.

We guarantee them to be first-class and worth One Dollar at retail or your money will be refunded.

Premium No. 115



ARTICLE	RETAIL PRICE	ARTICLE	RETAIL PRICE
1 Polished Box	\$.25	1 Rubber Eraser	\$.05
12 Steel Pens	.10	1 Red Penholder	.08
1 Pencil, Blue Lead	.10	1 Whole Sponge	.03
1 Pencil, Red Lead	.10	1 Chamois Pen-wiper	.05
1 Black Pencil and Compass	.15	1 6-inch Rule	.03
1 Pencil, Fine Black Lead	.05	1 Wood-covered Slate-pencil	.01
Total Retail Value	\$1.00		

We will send the Farm and Fireside One Year and the Scholars' Companion to any one for 60 cents

(When this offer is accepted the name may be counted in a club.)

FREE This Scholars' Companion Given FREE for a club of THREE yearly subscribers to the Farm and Fireside.

Address FARM AND FIRESIDE, Springfield, Ohio

Description...

The cut shows the exact size and shape of the knife. It has two blades made of razor-steel, hand-forged, oil-tempered, sharpened, and highly polished. It has genuine buffalo-horn handles, German silver bolster and shield, and brass linings. Being made of the best materials throughout and elegantly finished, it is a perfect knife. Satisfaction guaranteed.



Premium No. 414

Postage paid by us in each case.

This is one of the finest knives manufactured by the old reliable Humason & Beckley Cutlery Co. It sells in most hardware-stores for \$1.00.

FREE This fine Pocket-knife will be given as a premium for a club of FIVE yearly subscribers to Farm and Fireside. **FREE**

We will send Farm and Fireside One Year and this Knife to any one for 80 Cents

Address FARM AND FIRESIDE, Springfield, Ohio

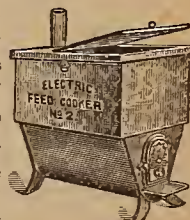


DOUBLE THE FOOD VALUE

can be secured from grain fed to live stock if it is cooked. It is more easily digested and assimilated by the animal stomach.

These ELECTRIC FEED COOKERS

cook feed in the quickest and best way and with the least amount of fuel. Made of cast iron, lined with steel. Boilers made of heavy galvanized steel, made in 12 sizes. Capacity from 25 to 100 gallons. Strong, well made and will last indefinitely. Order before the cold weather catches you. Write at once for free circulars and prices. Electric Wheel Co., Box 96, Quincy, Ill.



HOW TO MAKE MONEY.

samples sent FREE. Address immediately. P. O. BOX 5308, BOSTON, MASS.

We want one shrewd, careful man in every town to make a few thousand dollars for himself quietly at home and not work hard. Private instructions and valuable outfit of samples sent FREE. Address immediately. P. O. BOX 5308, BOSTON, MASS.



THE ELECTRICITY from the batteries will turn a needle through your table or hand. Cures Rheumatism, Liver and Kidney Disease, Weak and Lame Back, etc. For advertising purposes we will give ONE BAIT FREE to one person in each locality who is willing to introduce them. Address E. J. SMEAD & CO., Dept. No. 238, VINELAND, NEW JERSEY.

HUSTLERS WANTED to tack signs and introduce our 20th Century marvel. Salary \$70 per month and expenses not to exceed \$2 per day or commission. Write for particulars. ELECTROPATHIC CO., BUFFALO, N. Y.

FARMERS SAW MILLS, SHINGLE MILLS, PLANERS, CORN MILLS, HAY PRESSES, WATER WHEELS. Send for Catalogue. DELOACH MILL MANUFACTURING CO., 901, Atlanta, Ga., St. Louis, Mo.



CARDS Send 2c. stamp for Sample Book of all the FINEST & LATEST Styles in Beveled Edge, Hidden Name, Silk Fringe, Envelope and Calling Cards for 1899. YES, GENUINE CARDS, NOT TRASH. UNION CARD CO., 414 Columbus, Ohio.



10 CENTS PAYS FOR our big package of new and useful goods; best and biggest value ever offered; contains one package new and beautiful Silk Remnants, one Gold Pl. Ring, one Gold Plated Watch Chain, one Rose Pin, Crystal Top Scarf Pin, Great Parlor Game, one Flag Pin, Punch and Jody whistle, Magic Gold Tube, together with a 25 ct. cash value coupon and our Illustrated magazine, 3 months. All mailed, postpaid, for 10 cents. Address, C. E. VICTOR & CO., Box 1556, NEW YORK, N. Y.



PARKER'S HAIR BALM Cleanses and beautifies the hair. Promotes a luxuriant growth. Never Fails to Restore Gray Hair to its Youthful Color. Cures scalp diseases & hair falling. 50c. and \$1.00 at Drug.



FREE! This beautiful 18k. rolled Gold Gem Set Ring (send size), also large package of handsome Silk Remnants, bundle of Nee Lace, and my big bargain list, all for 10 cts. to pay mail. Pretty Coral Necklace free with every order. L. E. GUGGINS, Box 31, ROSELLE, N. J.

50 RECIPES for tonics, kidney and liver cures, etc. RECIPES for pain eradicators, liniments, salves. RECIPES for tobacco habit, veterinary remedies. **ALL PATENTED** and celebrated remedies 10c. per set, three sets 25c. THE JNO. M. HENDERSON CO., 925 F St., Washington, D. C.

HORSEMEN

One dollar for positive cure, curb or spavin. Three dollars for recipe; does not even remove hair. W. D. ANDREWS, 3119 1st Ave., So., Minneapolis, Minn.

THE MAUSER BULLET

"In some respects," said the major, "the Mauser bullet showed itself most merciful. Except at short range it made a clean small hole, with very little tearing of the tissues or splintering of bones. It frequently happened that men shot through the body felt very little inconvenience for some time after, and were able to walk a mile or two to the rear, or even to go on fighting. Men walked to the hospital station shot through the bowels, shot through the stomach, shot through the lungs, and many of them recovered. We have had men recover who were shot through the liver or the kidneys, and that was something unheard of before this war. And it was remarkable to see how the arteries would recede from before a Mauser bullet and avoid rupture. There were many cases where I could put my finger into a wound and feel the artery pulsating, and yet there was no puncture.

"There was a cavalryman in the Rough Riders' fight—I have this on the authority of another doctor—who was shot through the heart in the charge, but did not know it.

"I'm afraid I'm hurt, lieutenant," he called out, putting his hand on his breast.

"Go back to the rear," said the officer.

"Not while I've got breath in me to fight," answered the soldier. And it seems an established fact that this man continued in the charge for nearly five hundred yards before he dropped to the ground dead."

"What was the effect of the Mauser bullet at short range?"

"It was terrible, for at short range the Mauser bullet explodes; there is no question about this. I do not mean that it explodes like gunpowder by a chemical change, but it explodes physically. You see, during its early flight, the bullet, which is shaped like a long bean, wobbles as a top does from side to side. Later on it takes a steady horizontal position, and then makes a clean wound, but if it enters a body while wobbling it 'mushrooms' out, if I may so express it, and the projecting fragments work frightful havoc in bone or tissue. I saw a man in Company C, Sergeant Immen, who was struck in the head early in the fight. He was right on the firing-line, and must have got a bullet before it had taken its steady poise of flight; at any rate the wound in his skull looked as if it had been smashed with a hammer, and he died a few hours later."—Cleveland Moffet, in Leslie's Weekly.

CHESTNUTS AS FOOD

The counsels in France report that Indian corn as an article of diet among the French peasants is being replaced by the chestnut. A report from Limoges received at the state department says:

"The poor people, during the fall and winter, often make two meals daily from chestnuts. The ordinary way to cook them is to remove the outside shell, blanch them, then a wet cloth is placed in an earthen pot, which is almost filled with raw chestnuts; they are covered with a second wet cloth and put on the fire to steam; they are eaten with salt and milk. Heat-steamed chestnuts are carried around the city streets in baskets or pails; the majority of the working people, who usually have no fire early in the morning, eat them for their breakfast, with or without milk. Physicians state that as an article of food chestnuts are wholesome, hearty, nutritious and fattening. These nuts are often used as a vegetable and are exceedingly popular, being found on the tables of the well-to-do and wealthy. They are served not only boiled, but roasted, steamed, pureed and as dressing for poultry and meats."—St. Louis Republic.

NO LEAP-YEAR UNTIL 1904

The familiar rule that leap-year is every calendar year with a number divisible by four will be broken in 1900, which fact need not be regarded as an indication that even then it will be time for a change. This rule of the almanac may account for the proverbial activity of the new woman at the close of every century. Then there is no leap-year for eight years. February, 1905, will have but twenty-eight days, the extra day not appearing from 1896 to 1904. Centenary years are not leap-years. That year will be broken in the leap-year 2000, when the interruption may be regarded as an indication that it is time for a change. Centenary years divisible by 400 are leap-years, consequently there were twenty-nine days in February, 1600, and the same number of days will be given to February, 2000, and again in 2400. The object of this rule is to make the calendar year coincide with the solar year.—London Answers.



ONE of the most striking pictures in our new 1899 Catalogue is a long procession of men sowing onion seed with the "PLANET JR." Hill-dropping Seeder, one of the greatest labor-savers in the whole list. It shows how live Yankee onion growers are making money with the "PLANET JR." tools.

This catalogue will interest your whole family. It not only describes the Seeders, Wheel-hoes, and combined hand tools, the Horse-hoes, the Pivot-wheel Cultivators, the wonderful Beet Cultivator that works four rows at once, and all the other horse tools, but it includes also SIXTEEN FULL PAGES of fine photographic views—interesting field-scenes in France, California, New Zealand, Manitoba, etc., showing the different crops and methods of cultivation, and the "PLANET JR." tools at work.

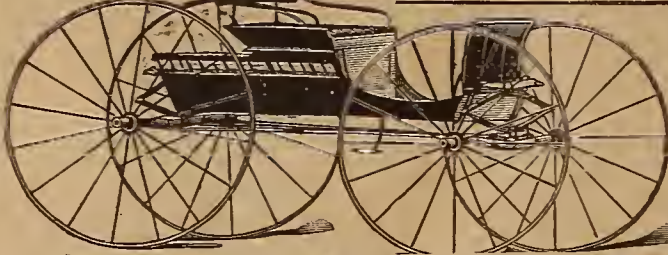
Watch for Chapter III, which tells of the prize farming operations of a pair of Manitoba girls.

Write us for a copy; it's sent free.

S. L. ALLEN & CO.,

Box 1107 F, Philadelphia.

SEND ONE DOLLAR



and send to us and we will send you this buggy by freight C. O. D., subject to examination. You can examine it at your freight depot and if found perfectly satisfactory, exactly as represented and the greatest bargain you can get, we will pay the freight agent OUR SPECIAL OFFER PRICE, \$19.95 and freight charges, less the \$1.00 you send with order. We will ship the buggy from Chicago, Newport, Ky., or Indianapolis, the point nearest you, and the freight will average about \$2.50 for 500 miles from either point. THIS OPEN BUGGY is latest 1899 style, end sprig, narrow or wide track. Body is Cornish style, 23 inches wide, 50 inches long, made from selected seasoned stock, corners rounded and mitered; sills mortised, screwed, glued and planed. Springs, highest grade stock, double reined oil tempered. Gear, made from second growth hickory. Coleman fifth wheel 15-16 inch double collar. Swaged Denton crystal steel axle; double reach ironed full length, bolted and braced throughout. Wheels, No. 1 grade Sarven's patent, made from selected second growth hickory. Painting, body highly finished and painted black with neat striping; gear, dark hewster green, or carmine. Trimming, upholstered in Ulman leather, patent leather dash; toe carpet, whip socket, anti-rattlers and shaft. Extra for pole in place of shaft, \$1.00. \$20.00 will be sold at \$19.95. Order at once. Don't delay. We will save you \$10.00 to \$20.00. For Buggies at \$16.50 and up, and Top Buggies of our own make, best work from our own factory at \$55.00, sent anywhere to examine, write for Free Buggy Catalogue.

SEARS, ROEBUCK & CO. (Inc.) Chicago, Ills.

SILK REMNANTS FOR CRAZY WORK.

A big package of beautiful Silk Remnants, from 120 to 150 pieces, all carefully trimmed, prepared from a large accumulation of silks especially adapted for all kinds of fancy work. We give more than double any other offer, and the remnants are all large sizes, in most beautiful colors and designs. With each assortment is four skeins of the very best embroidery silk, assorted colors. Send 25 cents in silver or stamps to Paris Silk Agency, Box 3045, N. Y. City, N. Y.

ASTHMA

CURED

BY THE

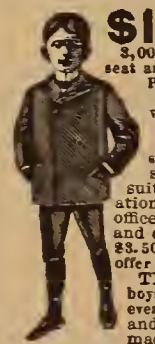
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The Kola Plant

A New and Positive Cure for Asthma has been found in the Kola Plant, a rare botanic product of West African origin. So great are the powers of this New Remedy that in the short time since its discovery it has come into almost universal use in the Hospitals of Europe and America for the cure of every form of Asthma. The cures wrought by it are really marvelous. Among others the editor of the *Farmer's Magazine*, of Washington, D. C., Mr. Alfred Lewis, testifies that after eight years' continuous suffering, especially in Hay-fever season, the Kola Plant completely cured him. He was so bad that he could not lie down night or day, for fear of choking. After fifteen years' suffering from the worst form of Asthma, Mrs. A. McDonald, of Victor, Iowa, writes that the Kola Plant cured her in two weeks. Rev. S. H. Eisenberg, Centre Hall, Pa.; Rev. John L. Moore, Alice, S. C.; Mr. Frank C. Newall, of the Market National Bank, Boston, and many others give similar testimony of their cure of Asthma, after five to twenty years' suffering, by this wonderful new remedy. If you suffer from Asthma in any form in order to prove the power of this new botanic discovery, we will send you one Large Case by Mail entirely free. All that we request in return is that when cured yourself you will tell your neighbors about it. It costs you absolutely nothing. Send your address to THE KOLA IMPORTING CO., No. 1164 Broadway, New York City.



\$1.95 BUYS A \$3.50 SUIT

3,000 CELEBRATED "KANTWEAR" double seat and double knee. Regular \$3.50 Boys' 2-Piece Knee Pant Suits going at \$1.95.

A NEW SUIT FREE for any of these suits which don't give satisfactory wear.

Send No Money. Cut this Ad. out and send to us, state age of boy and say whether large or small for age, and we will send you the suit by express, C. O. D., subject to examination. You can examine it at your express office and if found perfectly satisfactory and equal to suits sold in your town for \$3.50, pay your express agent our special offer price, \$1.95 and express charges.

THESE KNEE-PANT SUITS are for boys from 4 to 16 years of age, and are available everywhere at \$1.95. Made with double seat and knees, latest 1899 style as illustrated, made from a special wear-resisting, heavy-weight, ALL-WOOL Oakwell cassimere, neat, handsome pattern, fine serge lining, Clayton patent interlining, padding, staying and reinforcing, silk and linen sewing, fine tailor-made throughout, a suit any boy or parent would be proud of. FOR FREE CLOTH SAMPLES, Cures Colds, (suits, overcoats or alters), for boys 4 to 16 YEARS, write for Sample Book No. 900, contains fashion plates, tape measure and full instructions how to order.

Men's Suits and Overcoats made to order from \$5.00 up. Samples sent free on application. Address,

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VIOLINS, MANDOLINS, GUITARS, and other musical instruments sent C. O. D. subject to examination without one cent in advance. Buy direct from factory at wholesale prices. Save dealers' large profits. Here are three leaders. That cannot be duplicated anywhere. This sweet-toned Mandolin \$4.00. Equal to others sold by dealers at \$6.00. A high-grade, handsomely finished, \$6.00 Guitar for \$2.90. An \$8.00 Stradivarius model Violin including Outfit of bow, case, rosin, extra set strings and instruction book for \$3.15. Banjos \$1.25 and up; Music Boxes \$5.00. Cornets \$6.25. Pianos \$125.00; Organs \$21.75 and up, sent on 30 days free trial at factory prices. Large Musical Instrument, Piano and Organ Catalogue FREE explaining all about our "no money in advance plan." Write for Special 60 day offer. CASH BUYERS' UNION, 160 W. Van Buren St., B-7 Chicago, Ills.



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With or without Face Heater. For Hot Air, Vapor, Medicated, Turkish or General Bathing. Cures Colds, Rheumatism, Gout, Neuralgia, La Grippe, Female Complaints, All Blood, Skin, Nerve and Kidney Diseases. Reduces Surplus Flesh. Beautifies the Complexion. Size 39 x 1 in. folded; weight 7 lbs. It is not a cloak or sack but a Cabinet supported by a galvanized frame. Price \$5. Free Description Book. Agents: BULLOCK & McCREEKY 191 Summit St. Toledo, Ohio.

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HOW THEY GROW ONIONS
IN RHODE ISLAND.

ONE of the most striking pictures in our new 1899 Catalogue is a long procession of men sowing onion seed with the "PLANET JR." Hill-dropping Seeder, one of the greatest labor-savers in the whole list. It shows how live Yankee onion growers are making money with the "PLANET JR." tools.

This catalogue will interest your whole family. It not only describes the Seeders, Wheel-hoes, and combined hand tools, the Horse-hoes, the Pivot-wheel Cultivators, the wonderful Beet Cultivator that works four rows at once, and all the other horse tools, but it includes also SIXTEEN FULL PAGES of fine photographic views—interesting field-scenes in France, California, New Zealand, Manitoba, etc., showing the different crops and methods of cultivation, and the "PLANET JR." tools at work.

Watch for Chapter III, which tells of the prize farming operations of a pair of Manitoba girls.

Write us for a copy; it's sent free.

S. L. ALLEN & CO.,

Box 1107 F, Philadelphia.

\$1800. FOR FOUR TOMATOES

This is a wonderful Tomato. Immense size, best quality and will astonish all who grow it. Color bright red, very solid, few seeds and free from rot. Fruits ripen from July 4 till frost. We paid \$500. for one weighing 3 lbs. 3 1/4 oz., and Offer \$1800. Cash for fruit this year as follows: For one weighing 4 lbs. \$1000, 8 1/2 lbs. \$500, 8 lbs. \$250, 2 1/2 lbs. \$50. See what you can do. Instructions sent with seed.

\$300. FOR 6 NAMES!

Catalogue for 1899 is beautifully lithographed in colors and is full of new things. We have new Cabbage, Lettuce, Aster, Poppy, Pansy and Sweet Pea. Not one has been named and we will pay \$50. Cash for a name for each. Special Offer: We will mail one packet Mammoth Tomato also one packet each of the 6 new novelties and catalogue with instructions for 25¢. For 50¢ Silver or M. O. we send 50 Summer Flowering Bulbs for the ladies. FAIRVIEW SEED FARM Box 46 Rose Hill, N. Y.

HAIR SWITCH 65 CENTS.

WE SELL HUMAN HAIR SWITCHES to match any hair at from 65¢ to \$3.25, the equal of switches that retail at \$2.00 to \$5.00.

OUR OFFER: Cut this ad. out and send to us, inclose a good sized sample of the exact shade wanted, and cut it out as near the roots as possible, inclose our special price quoted, and 3 cents for postage, and we will make the switch to match your hair exact, and send to you by mail, postpaid, and if you are not perfectly satisfied, return it and we will immediately refund your money.

Our Special Offer Price as follows: 2-oz. switch 20-in. long, long stem, 65¢; short stem, 90¢; 2-oz. 22-in. long, long stem, \$1.25; 3-oz. 22-in. long, short stem, \$1.50; 3-oz. 24-in. long, short stem, \$2.25; 3 1/2-oz. 26-in. long, short stem, \$3.25. WE GUARANTEE OUR WORK the highest grade on the market. Order at once and get these special prices. Your money returned if you are not pleased. Write for Free Catalogue of Hair Goods. Address,

SEARS, ROEBUCK & CO. (Inc.) Chicago.

SEND ONE DOLLAR

Cut this ad. out and send to us, state number inches across top of your buggy seat in front, from outside to outside, and we will send you this Buggy Top by freight C. O. D. subject to examination. You can examine it at your freight depot, and if found perfectly satisfactory, the greatest bargain you ever saw, and equal to tops that retail at \$15.00, pay the freight agent our special price, \$6.80, less the \$1.00, or \$5.80 and freight charges. The freight charges will average about 30¢. for 500 miles.

THESE TOPS ARE BUILT TO FIT ANY BUGGY OR ROAD WAGON, cut them on in 20 minutes, made from 24-oz. best rubber drill, head and back stays lined with No. 14 cloth, side curtains unfurled, 3 or 4 black japanned steel bows, japanned prop nuts, wrought iron shifting rail, patent buttons, which makes it adjustable; full length back curtain with glass window, valance front and rear.

1,000 WILL BE SOLD AT \$6.80. Order to-day. WRITE FOR FREE BUGGY CATALOGUE. Address,

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We furnish the complete outfit, including 52 Cuban War Views, High Grade Stereopticon, large (14x21) Advertising Posters, Admission Tickets, etc. for a little money. Cut this ad. out and send for circulars with full particulars and copies of testimonials from exhibitors who are making big money with our outfits. Address,

SEARS, ROEBUCK & CO., Inc., Chicago, Ill.

REDUCED TO \$3.50.

To place our new Improved Thermal Vapor Bath Cabinet in every home, we send them complete for 30 days, with alcohol store, directions, formulas, to any address, upon receipt of \$3.50 each. Head steaming attach, 75¢ extra. ORDER TO-DAY. Ours the best Cabinet made. Rubber-lined. Latest improvements. Cures without drugs a hard road with one bath, rheumatism, lagrippe, female troubles, all blood, skin, kidney and nervous diseases. Guaranteed as represented or money refunded.

Recommended by best physicians. We're responsible. Ship promptly. Descriptive book free. Special wholesale prices to agents. Address the m'rs. Toledo Bath Cabinet Co., Toledo, O.

WOOD SAWS

Our Smalley and Battle Creek self-feed Drag Saws are the standard of the world.

Also all sizes of Circular Saws, and the celebrated B. C. Picket Mill Horse Powers for operating, Silo Machinery, Feed Mills, Root Cutters, Corn Shellers.

SMALLEY MFG. CO., Sole Makers, Manitowoc, Wis.

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4 BUGGY WHEELS \$6.50

HIGH GRADE, SARVEN'S PATENT, tired and banded, height 3 ft. 4 in., 3 ft. 8 in. or 4 ft. Spokes 1 1/8 or 1 1/4 in. For any other sizes send for catalogue. Cut this ad. out and send to us with ONE DOLLAR, state size wheel wanted and we will send them by freight C. O. D. EXAMINE THEM at your freight depot and then pay freight agent balance, \$5.50 and freight charges.

SEARS, ROEBUCK & CO. (Inc.) CHICAGO, ILL.

Cheapest to buy new than repair old—WHY?

\$6.50 buys 4 Buggy Wheels 7-8 in. Steel Tire \$6.85 buys 4 Carriage Wheels 1 in. Steel Tire

Repairing soon eats up price of new. Our wheels stand the racket.

We give full value for money. We can furnish axles and set boxes properly. Write for full price list and directions for measuring.

WILMINGTON WHEEL CO., Wilmington, Del.

USE IT FREE

30 days in your own home before paying one cent in advance—shipped anywhere, to anyone, for 30 days' test trial. We risk you, \$60 White Star Machine, - - - \$22.00 \$50 Pearl Machine, - - - 14.00

Standard Machines, \$29, \$12.50, 16.00 Full set of attachments free—buy from factory and save \$10 to \$40. WE PAY FREIGHT, thousands in use; catalog, showing 20 other styles, free. Each machine guaranteed 10 years.

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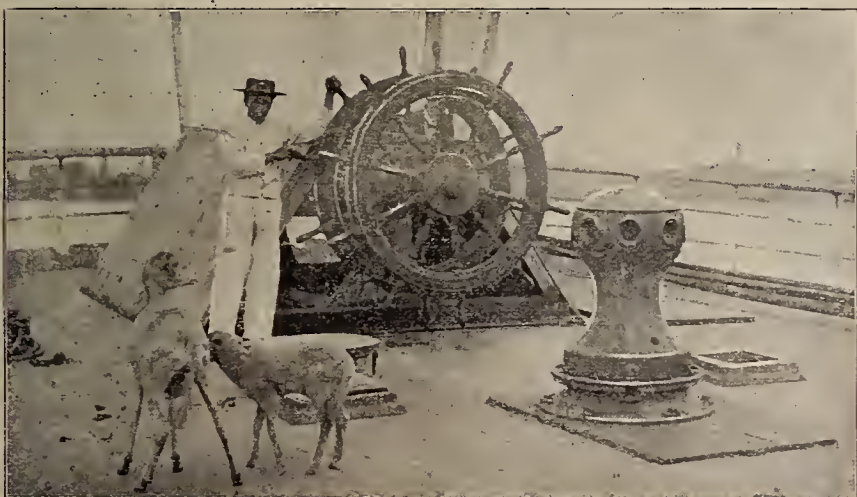
The next best thing to making a personal visit to strange scenes and countries is to have photographic pictures of the places. There are seventy millions of people in the United States who will never visit Cuba, Porto Rico, Hawaii or the Philippines; who did not get to visit the numerous camps of soldier boys; who were never on board a war-vessel, and who will never have a chance to see them except through this book of photographic views.

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In the book the illustrations are very much clearer and plainer, because they are printed on costly polished paper, with slower presses. The pictures on pages 1, 2, 23 and 24 are taken from the book. Each page measures 8 by 11¼ inches. Brings joy to every home, and should be in every school-room.



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The photographic camera tells no stories. It does not exaggerate, neither does it leave out anything. The photograph gives it to you as it would look if seen through your own eyes. Our new book of photographic views contains over 300 engravings which are exact reproductions of photographs. They are true to life and tell their own story at a glance.



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A View of the Homes of the Poor in Santiago de Cuba



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In our new book, "Photographic Panorama of our New Possessions," there are pictures of street and city views, of country and mountain scenery, of river and sea-coast sights, of interesting objects and strange people in Porto Rico, Cuba, Hawaii and the Philippines, which give an accurate knowledge of the beauty of these rich tropical islands, of the customs of their inhabitants and their modes of living and dressing, of their dwellings and occupations, public buildings and churches, and other sights and scenes which strike American travelers as typical, curious and wonderful.

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An Unexpected Roll-call Early in the Morning at Camp Alger, Virginia



VOL. XXII. NO. 9

EASTERN
EDITION

FEBRUARY 1, 1899

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24 NUMBERS

PEASANTS OF DALMATIA

BY EDWARD A. STEINER

THE Austrian Lloyd steamers which sail from Trieste to Corfu, in Greece, are seldom crowded by foreign sight-seers. The trip along the Dalmatian coast is out of the way of the ordinary globe-trotter, but when one strikes the track of these magnificent boats his eye has more to see and his heart more to feel than in any other country abroad—not so much in the works of man, but in man himself; for the native of Dalmatia is the most picturesque specimen of peasantry that can be seen anywhere in Europe. He is generally over six feet tall, muscular and angular, decked with the most gorgeous trappings, and so conscious that he is the greatest show on earth that he walks with the deliberation of an elephant and the grace of a peacock.

The coast of Istria is to our left; huge chalk cliffs, with here and there a city picturesquely sitting on the top of some inaccessible crag, perched there since the days when the inhabitants tried to get away from conquering Romans and Venetians. We sail on smooth seas. Island after island is circled, and fishing-boats and barges are seen plowing their way through the blue water. My traveling companions sit about in steamer-chairs and smoke cigarettes, for every one smokes them—men, women and children.

I venture to ask, among other things, how these Dalmatian peasants subsist, for the mountains are barren, even of grass, and only where the islands touch the sea verdure bordering on the luxuriant is seen. I am told that they cultivate a species of chrysanthemum, which in its powdered state is used as insect-powder. Besides this, the fig flourishes wherever there is earth enough to give it root; the olive's tender green is seen by the island's edge, and cypresses grow in mournful silence where naught else can sustain itself.

It is a poor land, crushed by the Roman yoke it bore for centuries, ravaged, subdued and made like a desert by the Venetians, who took every tree they could bring near

and Bulgarians, and are by far the handsomest specimens of their race and the most backward in civilization.

They cling most tenaciously to old costumes, and you find them to-day, in dress, speech and habits, very nearly as they were

and be thy love, but, Omar, I am poor and thou art poor, and we can't live on playing the tamburica and on lovers' taffy." And Omar tells her how much cash he has, and how many sheep, and how much he is willing to pay for her (for girls are bought

notice to the boys that "hunting and trespassing on these grounds is from now on prohibited." As a token the bride receives a silken neckerchief, which is much cheaper than a diamond ring.

Three days before the wedding five or seven boys go about to invite the guests. They do not hand in engraved cards, but shoot their guns in front of a house, make a pretty speech, and depart. The day before the wedding every invited guest sends to the groom's house a mutton carcass, also a large loaf of bread decorated with paper flowers and little flags. The women send different garments, a neckerchief being the least valuable thing. The same night all the guests assemble at the house of the groom, and as each guest comes he announces his arrival by a shot from his gun. After an elaborate supper the various officers of the wedding are appointed: First, a presiding officer, who is called stari svat, who must have tact and some executive ability; then the two leaders of the bride, one to walk before her and one behind her; a judge; a flag-bearer, and I do not know what else. The master of ceremonies makes a speech, turns the house over to the guests, who generally turn it upside down. They kill the chickens, frighten the cow out of her wits, and if they feel like it, make a bonfire of the farmer's haystack. Nothing is prohibited, and the father of the groom has to grin and bear it. Often the master of ceremonies is handled unceremoniously. He is laid on a bench, a feather-bed is put on top of him and beaten until it is torn to shreds, and our stari svat looks like a half-plucked turkey escaping his tormentors. The morning of the wedding-day breaks upon a badly broken-up lot, but they get themselves together the best they can for this important ceremony. They go through the village streets, drive if they have the wherewithal, shoot as often as they can, and drink between times. Every man who meets them has to drink with them, and by the time they reach the church the whole crowd and the whole village cannot boast of a single sober person. Returning from the ceremony, the real wedding-feast begins, and the toasts, of which there are ten (each with a different drink), end the feast and



ON THE SHORES OF THE ADRIATIC
"Strong are her sons, though rocky are her shores"

a thousand years ago—unchanged by changing fashions, and unspoiled by an enervating civilization. They still live in tribal relationship, every man being classed and controlled by his blood-relationship with others. Into the ninth and tenth generations a man's relations pursue him, and he is bound by the iron law of custom.

The blood-avenger is still busy among them, and a family feud lasts until every man of the whole tribe has given up the fight or given up the ghost. Often one family occupies a whole village and holds much of the property in common. Only the man is considered part of the family; a woman to them is what she was when she was taken out of Adam's ribs—a side issue. A woman gets a beating as regularly as an American woman gets a spring bonnet, only more often. Yet the Dalmatian loves his wife, only he has a peculiar way of manifesting it.

The love-making among them is the same sentimental affair that it is with us, though customs are widely different. I shall describe a few ways for the instruction of our young readers:

Once there was a Dalmatian lad whose name was Omar. He was the finest-looking lad in his native village, always neatly dressed, the handles of his pistols and daggers always bright and shining. He could play the tamburica, and sing most charmingly while he played. In the summer's night, when the shadows were deep and the cobblestone pavement quiet, Omar moved from street to street, strumming his tamburica; and standing before the window of his best girl, the beautiful Nyera, he sang:

"Beautiful and charming is my Nyera;
Fairer than the olives and the vineyards,
Fairer than all daughters of Dalmatia,
Fairer than the maids of Cernagora.
Nyera is my health, my peace, she is my fortune;
Nyera is my moonlight and my sun's reflection,"

and a lot more "taffy" too sticky to translate. Night after night the love-sick youth returns and sings and strums, but "Nyera lets down the curtains of her windows," Nyera blows out her burning tallow candle, Nyera listens to his singing and his sighing. "And oh," she says, "what a fool you are, my Omar."

Months passed, and one night Nyera opens her latticed window, and calls out: "God protect thee, Omar. What art thou doing? Thy songs sicken me (this is meant to be complimentary), gladly I would follow thee

or stolen in Dalmatia). Nyera does not let down the curtains, nor does she blow out the candle, and the rest of the story only a Dalmatian lover knows, and he won't tell.

As everywhere in the world, so in Dalmatia the girls like to be loved, but only too often the girl has to marry the man her parents have chosen for her. She is only a piece of merchandise that must be got rid of before it is shelf-worn. The boys, of course, may tell of their love; the girls have to sit silent and wait. Once a year custom allows them to try to get a lover, and they do it in this manner: On the eve of Palm Sunday five or six girls meet, bake cake, wind wreaths, and go at night to the houses where eligible boys live. They decorate the pump, water-buckets, and such utensils as they can find, and put a handkerchief on the pump-handle, which is equivalent to an offer of marriage. In the dawn of the morning the girls look to their pump-handles, and if their presents are gone, and others in their places, it means that "Barkus is willin'."

Everywhere the belief is common that the girl can by the use of charms win the affection of a man. A widower farmer of my acquaintance had a housekeeper who was as old as the woman who lived in the shoe, as ugly as the proverbial mud fence, and as thin as the unscriptural Job's turkey. She was deeply in love with my friend, and as she had no personal charms to win him she tried some others. She caught a black cat, black without even one white hair; killed it (this cat had only one life), took out its heart, made a pie of it, and served it to my friend for breakfast. He refused to eat mince-pie for his first meal, discharged the love-sick housekeeper, and a neighbor made her pay five florins for the cat that never came back. There are hundreds of charms that are practised, but the one with the black cat is about the only one that is not too disgusting to write down. If any one of my fair readers should try to experiment with a cat she might be more successful than the Dalmatian woman—cats in this country are cheaper, especially black cats.

The young man never goes in person to ask for his love, but a professional woer is hired, who does the business. He goes to the house of the beautiful Nyera, asks the parents to come out, and they strike a bargain if they feel so disposed. The woer then shoots his gun, which is a notice to all inhabitants of the village that Nyera is engaged (sort of a society column), and also a



DALMATIAN PEASANT GIRL

enough to the water's edge to float to Venice to build their magnificent dream city. In return our pious Venetians built fine churches, which in their marble whiteness and graceful architecture accentuate the poverty of the country, but cannot atone for the robbery practised for centuries upon a helpless people.

The Dalmatians are Slavs, belonging to the same group as the Russians, Servians



DALMATIAN PEASANT FAMILY

land the feasters under the table. The next day the wedding-guests are still present, and now the bride has to distribute presents, which are definitely fixed by custom.

After the wedding, which often lasts a week, the wife begins her life as chief drudge, for the mother-in-law in Dalmatia is truer and more dreadful than the mother-in-law of fiction. The bride does the work

(Concluded on page 6)

FARM AND FIRESIDE

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OF all the American peace commissioners Senator Gray has been regarded as the most conservative on the Philippine question. Whatever, therefore, he has to say on the subject will be heard with special interest. In his recent Wilmington address Senator Gray said, in part:

"We are now in a crisis of our national history, and your hearts and mind, as patriotic citizens of this great country, are full of anxiety as to the proper settlement of the momentous issues which have resulted from the war with Spain. While our country was in war with Spain we were ready to make, I hope, every sacrifice to insure the success of American arms, and bring victory and honor to the American flag. And when the war was over, I believe, the patriotic instinct of American citizenship demanded, as your president enjoined upon us, that we would exhibit magnanimity to a prostrate foe and moderation in the hour of victory, as we have forced the war with steadfastness and courage. In the first place, I want to say to you that it was my pleasure as well as what I conceived my duty to endeavor to carry out this instruction, so credible to us as a nation and so worthy of the high civilization of which we profess to be leaders.

"The acquisition of territory by the United States was not one of the objects of the war, and we solemnly declared in the resolutions of Congress that our only object in demanding the relinquishment of the sovereignty of Cuba by Spain was not to hold it ourselves, except that we might pacify it and fit it for self-government by its own people. But in this, as in all else, man proposes and God disposes, and it is one of the things that make thoughtful men desire to avoid war where it can be avoided, for no one can tell what its consequences may be. I ardently desired that we might escape the necessity of taking the Philippine islands, and assuming the burden that their taking will impose upon us, and I know that the president of the United States was equally anxious to the same end. But it became apparent that without our seeing unexpected conditions had been created, and out of these conditions unquestionably duties had sprung which could not be avoided or evaded by the United States.

"It was argued that the performance of

duty is sometimes not only unpleasant, but has dangers attendant upon it; nevertheless, a brave man and a brave nation will not shrink from it on that account. On the other hand, if American sentiment did not justify the return of these islands to Spain, no more could it justify leaving them derelict in the eastern ocean, the prey of the first occupant of European rapacity. The powers of Europe would acquiesce in our taking them, but they would not stand by and see them in their helpless condition of anarchy and disorder without seizing the opportunity to aggrandize themselves; and so it was thought best by the president and his advisers to take the cession of their sovereignty from Spain and hold it in trust to be administered in conformity with these high ideals, and liberty-loving traditions which animate and glorify the history of our country. Duty cannot honorably be avoided because it may bring pain or danger, nor can responsibility always be evaded because of its burdens.

"That I sought in Paris by all honorable means to escape this responsibility does not matter now. It came to a point at last that we must either leave the islands to Spain, take them as we did, or break off negotiations and come home without a treaty of peace. In the last event the truth would be broken and a state of active war would have been resumed. We would have had no cession of the sovereignty of the Philippines and none of Porto Rico, and no relinquishment of the sovereignty of Cuba.

"It is true that in the protocol of August 12th Spain had definitely promised that she would cede Porto Rico and relinquish Cuba, but without a treaty of peace that promise would not be performed. What would then have been the exigency of the situation? Undoubtedly we would have been compelled to go on and seize with the strong hand and by military power both the Philippine archipelago and the Greater and Lesser Antilles, taking by ruthless conquest what it was far better we should take by the voluntary cession of a treaty of peace.

"But, now that we have them, it does not follow that we are committed to a colonial policy or to a violation of those great principles of liberty and self-government which must always remain American ideas if our own free institutions are to endure.

"No country, and this country least of all, can afford to trample on its ideals. I have no fear that it will do so. Without assuming for a moment any right to speak for the president, I think I can assure you, with some knowledge whereof I speak, that he fully appreciates the duties and responsibilities of the situation, and that he is committed to no policy calculated to discourage, much less strike down, the aspirations of liberty-loving people all over the world. I belong to a different political party, but I should be false to my sense of justice, and to that pride which I feel as an American, if I did not declare my confidence in the patriotism and purity of purpose of William McKinley. He is no usurper of power, no stranger to American institutions, but one of the American people called to his high office by their suffrages, and it would be strange indeed if he did not share to the fullest extent in the love of our Constitution and the principles that underlie it.

"But the solution of the problems which confront us is not with the president. When the treaty is ratified no policy can be adopted without the sanction of Congress. And the whole American people will determine, through their representatives, what relations we shall sustain to the Philippines. Shall we hold the sovereignty in trust for their people, as we will do in Cuba, or shall we, with their consent, establish a protectorate over them or govern them as we will the island of Porto Rico? All these important questions will properly come up for determination after the ratification of the treaty. I will not entertain the fear that the American people will not stand by the principles of the Constitution and the declaration that they will not curb the ambition of territorial aggrandizement and exhibit to the world an example of moderation, justice and self-restraint that will be worth to us in moral strength more than all the islands of the seas."

THE steady improvement in most lines of industry during the past two years gives great encouragement for the future. The overcaution produced by the great business depression that reached its lowest level in 1896 has been succeeded by a feeling of full confidence that is now developing

into a speculative spirit that may even need curbing. This year, or next, this country may reach a higher prosperity than it has ever enjoyed.

In its review of prices during the last month of 1898 "Bradstreet's" says:

"Prices of leading staples in December reflected exceptional activity in many lines of trade and industry in a further uplifting of the general level of values, the close of the year finding "Bradstreet's" prices index numbers not only at the highest point reached in 1898, but at a higher level than at any previous date since October, 1893, more than five years ago. Examination of the prices index numbers for 1898 and preceding years shows a fairly steady growth in strength of values during 1898, though it will be seen that there was some hesitation shown during the month of March, growing out of the uncertainty ruling just previous to the outbreak of the war, and a trifling recession was also noted in September. It is a significant fact, too, in spite of the general complaint of unsatisfactory prices paid, that the close of the year 1898 found the general level of values five per cent higher than at the opening, while as compared with January 1, 1897, two years ago, the general level was fully twelve per cent higher, and compared with 1896 ten per cent higher. Compared with corresponding periods in immediately previous years, of course, the gain is not so marked, the increase over January 1, 1895, being only three per cent, and over January 1, 1894, only two per cent, while as compared with similar dates in 1893, 1892 and 1891 decreases varying from eight to seventeen per cent are shown."

THE anti-expansionists," says the New York "Sun," "keep up their talk about the consent of the governed, and Senator Bacon has put into his resolutions against the annexation of the Philippines the assertion that 'in the great declaration that "governments derive their just powers from the consent of the governed," the government of the United States recognizes that the people of the Philippines ought of a right to be free and independent.'

"It would be a waste of time now to pay any attention to the theory, which even an elementary knowledge of the history of the United States is sufficient to disprove, that the consent of the inhabitants of territory which the United States wishes to annex must first be obtained. It would also be a waste of time to repeat that the consent of the governed does not mean historically the consent of all the governed. All this has been gone over again and again in Congress and in the newspapers and magazines. The talk about the consent of the governed is about the weakest part of a weak case.

"But who are the Filipino strugglers for freedom and independence about whom the anti-expansionists are so concerned? Who is Aguinaldo, the leader of the movement that so stirs Senator Bacon and the rest of the contractionists? Aguinaldo is simply an adventurer, who has made a good thing out of rebelling against and compromising with the Spanish rulers of the Philippines, who returned thither by means of the United States, and is trying to set up a government of his own and for his own benefit and that of his friends. According to Mr. Wildman, the American consul to Hong Kong, who has had close relations with the Filipino insurgent leaders both there and in Manila, whither he accompanied Dewey's fleet, the majority of the natives of the best intelligence and position do not favor Aguinaldo, but prefer annexation to the United States. The men with property naturally want a stable government and do not want to take the risk of the constant revolutions that are sure to come as successive Aguinaldos grasp the power or strive after the gold whistle. As for the great majority of the inhabitants they will be happy, according to Mr. Wildman, under any form of government. They are not bothering their heads about the matter, nor are they expecting freedom and independence from Aguinaldo.

"As inhabitants of United States territory, the Filipinos will be free and independent. The attempt of the anti-expansionists to make a hero of freedom out of a mercenary factionist like Aguinaldo is absurd. He is not troubling himself about the consent of the governed."

ONE of the most important questions now before Congress is that of the Nicaragua canal. The concession from Nicaragua on which the pending bill is based will expire next October, if Congress fails to

act before that time, hence the necessity of prompt action, or the work will have to be done over again from the very beginning.

In an article by Captain U. S. Crowninshield in the "Century" for January, the advantages of the great canal are set forth very clearly and concisely.

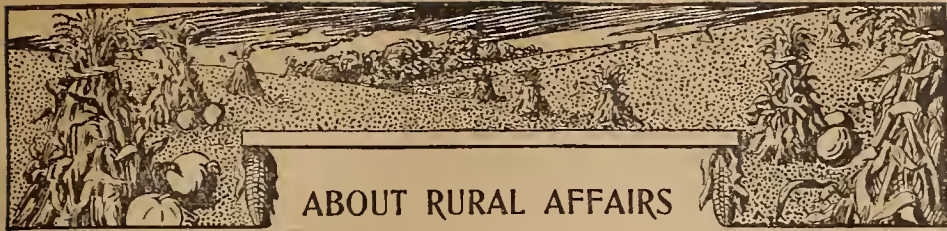
In regard to the commercial advantages Captain Crowninshield says: "The advantages to our own commerce of a waterway through the Central American isthmus will be divided among our Atlantic, our Gulf, and our Pacific coast ports, in inverse proportion to the order named. Considering the several parts of our country, it is, to my mind, the Pacific coast which will receive the greatest benefit from the opening of the Nicaragua canal.

"For many years—in fact, from their very settlement—the states of California, Oregon and Washington have not received their proper proportion of European immigration. Like drops of water upon a dry sponge, this flow of immigration has been absorbed by that part of our country lying east of the Rocky mountains; and while it is true that the opening of several transcontinental railroads has, to a certain extent, assisted people in reaching the Pacific coast more readily, it has never developed, as was expected, a proper flow of immigration into this very important part of our country. The reason of this, in my opinion, is not that the immigrant could not readily reach the regions in question, but that, once there, he found that the railroads did not enable him to send his products to a market upon terms as favorable as were secured by those who had located nearer the Atlantic coast.

"The transcontinental railroads have never carried eastward the great bulk of the more important agricultural products of California and Oregon. Every bushel of grain products of these states, reaching the enormous amount of over a million tons annually, is sent in sailing-vessels to Europe via Cape Horn. Immediately upon the opening of the Nicaragua canal the status of the producers upon our Pacific coast will be changed. They will be brought eight thousand miles nearer to their market! This is a fact of tremendous importance. . . . A voyage of one hundred and thirty-five days must be made around the stormy cape before a cargo of grain can reach its destination; whereas, when the Nicaragua canal is completed, the same cargo will be taken to Europe by steamer in thirty-five days. Thus will the owner of the cargo be able, by sending it through the canal, to dispose of it sooner by over three months' time than if he had to wait for payment when it was sent around the Horn: so will he be able, upon a given capital, to do three or four times more business.

"The advantage of the Nicaragua canal to our gulf ports, while perhaps not so great as to our Pacific coast, will still be very considerable. The fact that our ports on the Gulf of Mexico are nearer to the canal than any other United States port is of itself an advantage not to be lost sight of. The canal will be of special benefit to the cotton-producers of our gulf states, as it will furnish them a shorter water-route into the Pacific ocean, and thence to Japan and China, where there is a large and increasing demand for our cotton. Railway rates for carrying cotton to San Francisco are now most exorbitant—in fact, nearly prohibitive; but once the canal is opened, scores of cargoes will start annually from New Orleans, Galveston and Mobile for the far East, and thus will the canal furnish a new outlet for this important American product, and enable it to reach a market from which it has hitherto been debarred. The great lumber trade of Pensacola, and the coal and iron products from Tennessee and Alabama will also be able to reach the markets of the west coast of South America and Mexico, which, without a canal, can never be opened to them. The manufacturers of our central and eastern states, who can reach Pacific ports in both North and South America only by the long voyage around the Horn, or by trans-shipment over the Panama railroad, will be able to land their goods in these regions much more quickly and more cheaply than at present. In fact, the conditions which govern this trade-route, now so favorable to Europe, will be reversed by the interoceanic canal.

"All parts of the country, from a commercial point of view, will receive benefit from the construction of the Nicaragua canal. Markets will be opened to us which, owing to unfavorable water-routes, we have never been able to reach, and the export of American manufacturers will be stimulated and increased to a marvelous degree."



ABOUT RURAL AFFAIRS

Risks from
Grape-seeds

For years the fear of appendicitis has taken all the enjoyment out of the legitimate use of grapes and possibly of other fruits containing small seeds. Every time we wanted to eat a nice bunch of grapes we had to think of that useless, dangerous vermiform appendix, and imagined that it were filling up with the carelessly swallowed seeds, and the picture of the surgeon with his ever-ready knife loomed up before our mind's eye, and just about scared us out of our wits. There was not much fun in it, either. The surgeons were always ready to slash on slightest provocation, and in the majority of cases probably there was not a thing the matter with the vermiform appendix; yet the patient died just the same. Now comes Dr. Hutton, and tells us, in the "Medical Record," to be of good cheer, as he can offer to allay all our fears, so that we may hereafter enjoy grapes and other fruits, with or without seeds, to our hearts' content. He says:

"This paper is a protest against the current surgical theory and practice that all cases of appendicitis must be split open. This protest is based on twenty-seven years' experience as physician and surgeon. . . . My experience is that appendicitis, and all other bellyaches for which men now operate, are promptly amenable to proper medical treatment. I can recall one hundred cases treated with symptoms of this malady, . . . but I have never yet met a case of it in which I felt it was my duty to cut, or which terminated fatally. . . . I shall cite other unimpeachable practitioners who share my views, that medical treatment avails in this malady, one showing forty-nine out of fifty-one cases successfully treated—being more than ninety-six per cent. My treatment for appendicitis is free calomel and soda purgation, supplemented by hot applications, to be followed by a saline if action is too slow." It is refreshing to see physicians denounce some of the new-fangled notions of the profession. O Science, how many have been murdered in thy name! But how good the grapes will taste to me hereafter!

Bees and Fruit

Careful experiments quoted in Bulletin No. 26, issued by the Department of Agriculture, gave the following showing: Forty apple-blossoms, protected, gave no fruit, the same number of fruits exposed to bee work gave 15 fruits; 140 pear-blossoms, protected, gave no fruit, the same number exposed gave 7 fruits; 300 cherry-blossoms, protected, gave 9 fruits, the same number exposed gave 119 fruits; 60 strawberry-blossoms, protected, gave 9 fruits, the same number exposed gave 27 fruits; 184 raspberry-blossoms, protected, gave 93 fruits, the same number exposed gave 160 fruits; 10 heads of clover-blossoms (red), protected, gave no seed, the same number exposed gave 191 seeds; 10 heads of clover-blossoms (white), protected, gave no seed, the same number exposed gave 541 seeds. This is indeed a very favorable showing for the honey-bee, at least as claimed by our bee-keepers. But we should not forget again that there may be ten other insects, especially bumblebees and various beetles, to every bee which have brought about that result. In the case of the red-clover blossoms, for instance, we know that the honey-bee could not have been the agent which secured the pollination.

Feeding Cattle

In one of the last issues of the "American Agriculturist" I find the following item as a piece of useful information:

"Timothy hay, taking price into consideration, is one of the most unprofitable rough feeds for fattening cattle."

But if not for fattening, what is timothy hay good for anyway? It has an insignificantly small proportion of blood and muscle forming materials, while fifteen sixteenths of its food constituents are fat-formers. So surely, if this hay is most unprofitable for fattening, it surely is unprofitable for any other purpose except sale. And that is about the real state of the matter. I now buy timothy hay if I have to buy coarse fodder; and if I raise any I sell

it. Good clover hay is the thing to buy and feed. It is a well-balanced ration for cows as well as horses, and with corn (ground or otherwise) the best and usually cheapest fattening ration. I believe that timothy hay is more of a curse than a blessing to stock-owners in America.

I have a very high estimate on the value of wheat bran as a food for general purposes. In fact, I use it as the chief grain ration to balance coarse feed-stuffs, especially corn fodder, hay, etc. A week or two ago the following editorial paragraph appeared in the "American Cultivator":

"An exaggerated idea about the value of wheat bran as feed has, we believe, been cultivated by many farm papers and backed sometimes with indorsements from professors in agricultural colleges. We have often seen the statement that bran, ton for ton, was worth more than oats, and farmers who have grown oats have been advised to sell the grain and invest in oats. This, we think, is bad advice, for though chemically bran may be as rich as, or even richer, than oats, it is not equally adapted to feeding. Only ruminating animals can get the best results from bran, and its effect in making the bowels laxative destroys much of its good even for them. It is too coarse to be fed profitably to hogs. They will not eat it unless starved to it. Fine wheat middlings have all the nutritive properties of bran, but we doubt whether, under modern processes of flour-making, these are as good as oats. The truth is, the reputation of bran has been growing at just the time when its real value has been deteriorating."

To tell the unvarnished truth, I did not relish this a bit; but to learn what our best experts think about the value of bran, I wrote to Dr. C. D. Smead, our "apostle of the balanced ration," and received from him the following explanation:

"The writer of that editorial in some measure is right, but in the main he is way off. To be fed to horses as a principal food, oats having a nutritive ratio of 1 to 7 are practically a perfect food, providing the horse is worked regularly and the oats fed to a thousand-pound horse in quantities of (as a rule) twelve pounds in three feeds daily with a little hay for stomach distention. But to the idle horse they cannot be fed as safely alone as with some bran. The milk-cow needs a food of much more narrow ration than the oats, without her coarse food is wholly clover hay. Now wheat bran has a nutritive ratio of 1 to 3.2; wheat middlings a ratio of 1 to 4.6. If timothy hay, stalks, straw of any kind or ensilage are fed oats cannot as well balance the ration as the wheat bran, even if they were valued at the same price, as one pound of bran as a protein food is equal to over two of the oats for the purposes we feed it for. The assertion that the wheat bran makes the bowels laxative is true, and that is why we need to feed it to all constipated animals like the horse and sheep. As to its being largely purged away, that is untrue, except in individual cases when overfed or fed with clover hay or feeds of like character, when such may be the case. True, as he says, swine do better on the middlings simply because we feed bran and middlings to swine as their main diet sometimes, and the middlings are more nearly a balanced ration. Wheat bran is too narrow, and the pig does not relish it as well; and the stomach-juices do not as readily act upon it as upon the middlings. We feed grain foods on the farm not alone for the actual nutrition in them, but to balance up our carbonaceous foods, of which we have such an abundance. We, as a rule, need protein; therefore, bran is so valuable. We need it for two purposes; namely, to balance rations with, and for its laxative effects when dry food is being fed. In conclusion I will say you are quite right in feeding as you have been doing, and when you can purchase wheat bran of good quality for \$15.00 or even \$16.00 a ton you can wisely feed it. In my long experience I have never seen any evil results follow the feeding of it judiciously to any animal. If fed nearly exclusively as a grain food to bulls and rams there is some danger of too much phosphatic matter creating stone in the bladder. Therefore a little linseed-oil meal, or better, ground flaxseed should be fed with it."

T. GREINER.

SALIENT FARM NOTES

Self-help

C. A. S., New Hampshire, says he left the workshop for the farm because of an inherent love for the country, but he thinks that neighboring farmers have not treated him as well as they might. He is now living on a farm of 150 acres that is badly run down, and he can see no help for himself or the farm unless he can obtain a small herd of cows to convert the produce of the farm into milk and manure. Unfortunately, he is short of funds, and therefore unable to procure the cows, and he has become somewhat soured because local moneyed men will not assist him.

When I was five years of age my father lost every cent of quite a comfortable fortune by indorsing the paper of three good friends who satisfied him that they had a sure cinch on something reaching well up toward a million. When he found himself bankrupt he sought the assistance of old friends, confidently expecting that it would readily be extended, but he then and there learned a lesson he never forgot. When he was rich and making money his friends thought him a fine business man and an excellent financier, and he could get all the assistance he wanted; but when his fortune disappeared they regarded him as a man whose business judgment was unsound, and therefore an unsafe man to credit. One of them frankly told him so, and advised him to go somewhere else and begin again.

He took this man's advice, and went among strangers and rented a farm, and the first year farmed with an ox, a cow and an old plug of a horse, and a plow that would give C. A. S. a fit. For eighteen months the family of nine lived on corn-meal, potatoes and a little pork. During that time one of the boys hired to a neighbor two months, and then invested all of his wages in a barrel of flour. It was a hard struggle with poverty for three years, but he worked his way out, and finally became the owner of one of the best farms in the township.

He used to tell us to never rely on anybody else for help, but to help ourselves. If we could not carry a whole load, to carry half of it and come again. Another thing he taught us was to let other people's affairs alone and attend strictly to our own. "It is none of your business," he would say, "if Mr. A. is rich or Mr. B. poor, you have no right to envy Mr. A. nor any good reason to worry about Mr. B. How Mr. A. and Mr. B. manage their affairs is no concern of yours; you will find that you will have all you can do if you attend to your own properly."

C. A. S., and all others situated as he is, should cease looking to others for help, and go to work and help themselves. Just the best way to do this may not seem clear just now, but "where there's a will there's a way." C. A. S. thinks that if he had ten cows he could get along swimmingly. Has he demonstrated his ability to secure the best results from one? A herd of ten cows might be of great assistance to him, yet I think it would be better for him to acquire them two or three at a time than all at once. I once knew a man who was constantly telling how he could get rich if he only had eighty acres of land. Through the death of his wife's uncle he got just what he had so long wanted. He held it eleven years, and then it was sold under foreclosure of mortgage. He is now back at his old business—a day-laborer.

The men who are most successful in any business are those who have begun at the bottom and worked their way up—who have earned everything they possess and have kept out of debt. It is not a good idea to go into debt for stock or implements if one can possibly get along without them. I have known men to make harrows out of rails and pieces of hickory stove-wood rather than go in debt for them. I knew another man to cultivate forty acres of corn with a wooden implement he made himself, and he kept the ground clear of weeds and raised an excellent crop.

A stranger came into an adjoining county and bought eighty acres of land, paying only one third of the purchase price. It was plain to any one that he was in straitened circumstances. There is a creamery in the little village, and it did not take him long to discover that there was money in cows. He went all over the neighborhood and bought heifer calves from those who would let him have them at a small advance on veal prices.

He got fifteen head and raised them on corn-meal mush mixed with the milk of his one cow. That was four years ago, and he now has a herd of eleven good milk-cows which he could not have purchased for ten times the price if he had waited until they were grown.

Cannot C. A. S. follow his example? Usually it is not a difficult matter to buy young calves in a dairy section. Those who own the cows generally try to get rid of the calves at the earliest moment possible. I have known them to be killed and fed to hogs. In such a locality one can pick up ten or fifteen young calves in a day's drive, and get them at a low figure. If he will take good care of them, feeding warm mush and milk, they will thrive all right and make good cows. Possibly among the fifteen there will be three or four that will not be good milkers and will have to be sold for beef, still he will lose nothing on them. It is far better for a man to build himself up than to wait for somebody to build him up. He is not so likely to topple over.

FRED GRUNDY.

2

THE IMPORTANCE OF MILKING CLEAN

A Danish farmer lately published a few paragraphs on certain results he had obtained by changing the methods used in the milking of his cows. A few paragraphs, accompanied by sundry figures, are all the articles contain, yet these figures and statements are of most vital importance wherever dairy cattle are kept.

All things equal, the absolute and the average amounts of milk yielded by each cow during two successive years were as follows:

	Average
1889-90: 5158 lbs. of milk.....	5054 lbs.
1890-91: 4949 lbs. of milk.....	
1891-92: 4575 lbs. of milk.....	4613 lbs.
1892-93: 4651 lbs. of milk.....	
1893-94: 4259 lbs. of milk.....	4600 lbs.
1894-95: 4942 lbs. of milk.....	

During the first five years the milking was done by inexperienced hands; none of the milkers had had any training in the methods of treating milk-cows, although they might probably be as well acquainted with farm-work as any average farm-hand, male or female.

In 1895 a change was made. The care of the entire herd was placed in the hands of some young men with practical and theoretical knowledge of advanced methods in dairying, and their wages were paid in per cents of each hundredweight of milk delivered at the creamery.

The outcome of this change was a decided increase of the yield of milk each month. The cow in question gave larger amounts of milk in each successive year, and her example was followed by all her sisters:

	Average
1895-96: 5456 lbs. of milk.....	5491 lbs.
1896-97: 5526 lbs. of milk.....	
1897-98: 5738 lbs. of milk.....	

The average for each milk year shows best the results of the new departure. In this particular case the difference in the yields of the first and last year recorded is over eight hundred pounds.

The financial significance of this increase is that the owner could pay all the wages of all his milkers out of the increase in the yield of milk.

In addition to this, the value of the milk was heightened by careful attention bestowed upon the animals. This is demonstrated by the average percentage of fat:

1889-1891: 3.29 per cent.	1893-1895: 3.16 per cent.
1891-1893: 3.28 per cent.	1895-1897: 3.39 per cent.
	1897-1898: 3.43 per cent.

The additional care bestowed upon this herd of dairy cattle has had, then, the following results:

- (1) An increase of the yield of milk.
- (2) An enlarged percentage of butter fat.

While it is shown that with the decreased yield of milk follows a decreased percentage of fat.

And these results were obtained, not by larger rations, not by a change in the general management of the herd, but simply by conscientious, clean milking.

J. CHRISTIAN BAY.

2

FERMENTS IN TOBACCO

Secretary Wilson says: "We have just secured the services of an eminent German scientist who will make investigations in this country in regard to the ferment in tobacco. This is a subject of which little is known. There is no doubt in my mind but that the ferment in the tobacco-leaf largely controls the quality of the prepared product. The subject is one which I expect will develop very interestingly."

GUY E. MITCHELL.

OUR FARM

FARM THEORY AND PRACTICE

BUYING MANURE.—A successful farmer recently said: "For some soils I prefer paying one dollar a load for stable manure, drawing the manure three miles, rather than to do without the manure." His experience is that a few two-ton loads of good manure, spread evenly over an acre of his thin soil, insured a good clover sod, and when such a sod was secured he was sure of his ability to place the land upon a paying basis. This man buys "worn-out" farms as good investments, and his thought is that a few dollars more an acre, invested in a top-dressing that helps the grain and brings the clover, make the profit possible. Quite often a less sum invested in commercial fertilizers gives the needed result; sometimes it does not. The main point is this: Capital is invested in thin land that is helpless—cannot make a good sod, and the way—the only way—to make such land pay is to add to the amount of the investment sufficiently to get the clover so that the soil can help itself.

CRIMSON CLOVER.—Much less is written now about crimson clover than was the case a few years ago. Many farmers throughout the central states are convinced that it is utterly unreliable for them, and the demand for seed has fallen off very materially. I have shared this belief, and yet we should bear the fact in mind that some farmers north of the fortieth parallel of latitude have success with this clover. The apparent reason seems to be that they sow early in the season and cover the seed deeply. The seeding is done at the last cultivation of the corn in July, and the seed is put into the ground deep enough to get the needed moisture. If corn is given surface-cultivation there is usually moisture at the depth of three inches or less even during the drought. By deep seeding a good stand and fall growth of plants is obtained, and it was in this particular that the usual shallow seedings have been failures.

POTATOES FOR FEED.—A bushel of corn has a nutritive value equal to that of half a dozen bushels of potatoes, but the potatoes may be so used that they may have a food value much greater than the bare analysis indicates. Succulent food of this character, given in the winter when an animal has otherwise only dry feed, aids in the digestion of the grain and coarse feed. In the case of cows where silage is not used a gallon of potatoes, fed immediately after milking, does not materially affect the flavor of the cow's milk, and increases the amount. A peck of sound potatoes is often given, though this amount is hardly safe when the best milk and butter are required. Horses are benefited by an occasional feed of potatoes. For hogs the potatoes should be cooked. Small potatoes can be utilized in this way, and in limited quantities are worth ten cents a bushel in a year of average prices of feeding-stuffs.

ODORS AFFECTING MILK.—Silage, potatoes and other foods of like character should be fed immediately after milking. The milk of the cow is quickly affected by the odors of the foods taken into her stomach. These odors escape rapidly, permeating the system of the cow and tainting the milk in their escape through the skin. Wild garlic, which is very odorous, can be eaten by a cow six hours before milking-time without much noticeable effect upon the milk. Tainted food placed before a cow at milking-time will affect the milk through the cow's breath, even if she does not touch the food. Objections to the use of silage are based on results when the silage is given immediately before milking, or when the silo is in the barn, close by the mangers, and the odor is strong. The very highest-priced butter is made from milk produced by silage, when it is handled and fed in a rational way. It should be added that the flavor imparted by the best silage is not unpleasant to many consumers of choice butter, and the feed is often given before milking. But the only safe rule, as many creameries believe, is to require all patrons to feed after milking, because much silage is too acid and often slightly moldy, and the odor often spoils all the milk for best results. Some condensing-factories do not permit the use of silage at all, but this can be due only to prejudice or fear that producers will not observe the rule that the feed be given after milking, so that the unpleasant odor of any bad silage may pass away before the next time of milking.

THE GENERAL-PURPOSE COW.—This is the day of special breeds for specific purposes. The conformation of the draft-horse is entirely different from that of the race-horse. The beef breeds of cattle have a remarkable tendency to make muscle and to lay on fat. That tendency has been fostered and developed until the animals of that class make marvelous growth, converting to their own use about all the nutritive elements in their food. The dairy breeds, on the other hand, have been bred to convert their food not into flesh for themselves, but into milk for their owners' use. One is a machine for changing feed into beef, and the other for converting feed into milk. The dairyman, wanting only milk and butter fat, uses breeds that are adapted to this work. But there is a big class of farmers that are not specialists in the dairy line, but want to keep a small dairy for the profit in the business, and at the same time produce calves that can be raised and marketed for beef. Such a farmer wants a profitable cow for the dairy, and yet he is a grazier and feeder as well as a dairyman. It is useless to say that he should keep the special dairy breeds and buy the calves of beef breeds that he wishes to raise, and feed for the block. This is not practicable. It results that there is a big demand for a cow of a type that many breeders assert does not exist—the general-purpose cow. I am more and more inclined to believe that the specialists are not safe leaders for the average farmer, and that the animal which combines, as far as possible, the best qualities of both types of cows, is the profitable one for the class I have mentioned. The calves are needed for feeding, and yet their dams must yield some profit in the dairy. The breed that combines the two types in the highest degree will not pay the specialist, be he dairyman or feeder, but it does fill a place on the farms of the thousands that engage in general farming.

DAVID.

2

VICIOUS SOWS

The number of hogs lost because of insufficient care of sows at the time of farrowing has been a source of regret to many swine-breeders. In cases of especially vicious animals there are on record many cases in which every pig was lost, either because the mother ate up her offspring after birth or on account of her lying the pigs to death.

The cause of viciousness in sows at the time of farrowing is often the pain occasioned by normal narrowness in the lower part of the genital organs. The mucus membrane will sometimes be pushed up into folds—"curtains"—which obstruct parturition. A great deal of relief may be effected by introducing a clean hand in the vagina and pulling forth the young pig.

Each new-born pig should be placed at once into a basket, and fed on cow's milk and water (equal parts). One teaspoonful of this mixture generally suffices for each animal.

After the farrowing the young pigs are brought to the sow, and here comes the dangerous moment, when one or more of the young ones are bitten or smothered to death. The danger may, however, be considerably lessened by the following simple devices.

Biting the pigs is prevented in the following manner:

A leather strap (Fig. 1) is laced about the sow's neck, due care being taken that the

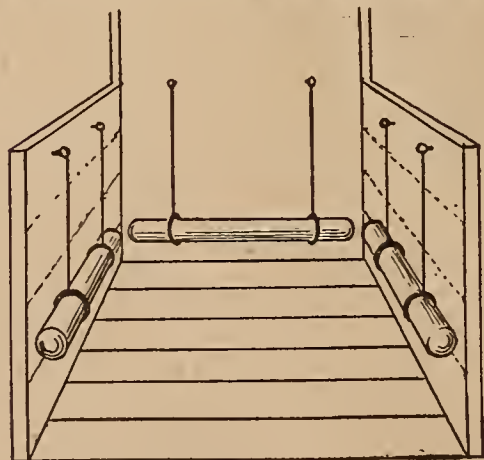


FIG. 2

animal can breathe freely. Then the snout and the lower jaw are tied together by means of a strong, flexible, soft (cotton) cord, the ends of which are carried up to the leather strap, above and between the ears of the animal. To prevent this cord from slipping off two more fastenings are made, one on each side of the lower jaw. As a rule this muzzle can be removed in a few days' time. "Lying to death" is frequently obviated by the insertion of a small shelf, under which

the young pigs may rest safely, in the wall of the pen, a short distance from the floor. Much more effective, however, is the device shown in Fig. 2. Round wooden bars are suspended from the walls of the pen, at a distance of about six inches above the floor. These bars should be five inches in diameter. When the sow throws herself down she will be pushed away from the wall, the place where young pigs are most frequently caught and choked.

J. CHRISTIAN BAY.

2

WINTER NOTES

The success of the window-garden depends entirely upon the care received. In the summer plants may grow and thrive in spite of neglect, but in the winter, when their life-blood is sluggish, they will quickly resent harsh treatment. Minute insects, dryness of the atmosphere and perhaps dust are the chief causes of failures in the window-garden. If the leaves turn yellow and fall off examine the under sides for the red spider or plant-louse. The red spider is a mere mite and may require a magnifying lens. Mealy-bugs and scale-insects may also appear. Washing and spraying the leaves with kerosene emulsion will be found the most effective way of ridding plants of such parasites. The soap-suds of the wash-tub makes an excellent douse for plants, tending to keep them from bugs and fertilize them as well. Tobacco-water also affords a combined insecticide and stimulant to growth. If the dirt in the pots seems infested with earthworms or other vermin saturate it with clear lime-water. This cannot injure the plants if the earth is soon after drenched with rain-water.

Serious results are liable from feeding old horses having poor teeth on unground or unbroken feed which they cannot half masticate. Some such horses are very voracious and will bolt their food, not even chewing it to the extent possible for them. Such swallowing of food of course reduces the flow of saliva, which is the real beginning of digestion. Dry feed, ground oats, corn-meal, bran, etc., will oblige such animals to eat slowly, as it is necessary to moisten the food before they can swallow it, so they cannot eat faster than the flow of saliva will prepare the food. In the case of cattle, so long as they do not choke it matters little how fast they eat, for it is well-known they have their food to chew over again. This process of cud-chewing is an operation about which they never hurry. If they are disturbed or hurried they stop chewing. It is thus desirable that cattle should, after milking, be left undisturbed to their ruminations.

Animals unprotected against the exposure and cold of winter in the matter of shelter are provided by nature both with heavy coats and with layers of fat under the skin. This latter protection is found in all the arctic animals. Fatty foods produce fat, and the inhabitants of the far North feed themselves upon the blubber or solid fat of whales and other animals. The inference to be drawn from these facts is that animals during the winter should receive good heating food, and that in order to avoid the necessity of excessive feeding they should be protected by warm quarters against the cold blasts of the Northwest winds. Nothing is so chilling, penetrating and wasting to the body's heat supply than the bitter winds of the West and Northwest; they are far worse than still cold. Well-ventilated, comfortable and warm sunny lodging will save the feeding of much heat-producing food.

GUY E. MITCHELL.

2

VALUE OF MANGELS IN FALL AND WINTER

Among stock-feeders mangels have been considered less valuable as food for animals before Christmas than after. Yet when asked why this belief was held the stock-raisers could only say that their observation indicated such to be the fact. Recently, however, experiments have been conducted that prove the stockmen's theory to be well founded.

Chemical examinations of the roots were made during the various months, which have shown that during the early autumn the amount of harmful nitrogenous compounds is very large, but that after being stored for some time the proportion of these decreases

rapidly, and by the middle of January less than one half of the original quantity remains. During this time, also, the quantity of harmless and of useful forms of nitrogen, which are at first comparatively small, increase largely.

Thus, the feeding value of mangels during the winter months is likely to be attended with better results than during the fall, because changes in the chemical composition of the roots reduce the amount of substance that causes digestive derangements and increase the quantity of nourishing nitrogenous compounds in them. M. G. KAINS.

2

WHITE VERSUS YELLOW CORN

It is a common opinion among farmers that yellow corn is more oily and therefore worth more for fattening purposes than white; but chemical analysis scarcely supports this view. Following are the average analyses of duplicate samples of white and yellow corn, grown in different states, and reported in Experiment Station Bulletin No. 11, of the United States Department of Agriculture, the analyses being based upon the absolutely dry substance, and in several states being the average of two or more determinations:

WHITE			
Grown in	Protein	Carbo-hydrates	Fat
Illinois	12.9	78.1	4.7
Kansas	11.8	78.2	5.8
Michigan	13.4	76.7	5.4
Missouri	12.0	76.5	6.7
Texas	11.9	77.5	6.0
Wisconsin	10.6	80.9	5.1
Average	12.1	78.0	5.6
YELLOW			
Grown in	Protein	Carbo-hydrates	Fat
Illinois	12.4	77.6	5.1
Kansas	11.0	79.5	5.6
Michigan	13.2	76.8	5.4
Missouri	10.5	80.3	5.4
Texas	12.5	77.1	5.9
Wisconsin	11.6	80.1	4.2
Average	11.9	78.6	5.3

These analyses justify the conclusion that there is little, if any, connection between the color of the grain and the percentage of either protein or fat.

CHAS. E. THORNE.

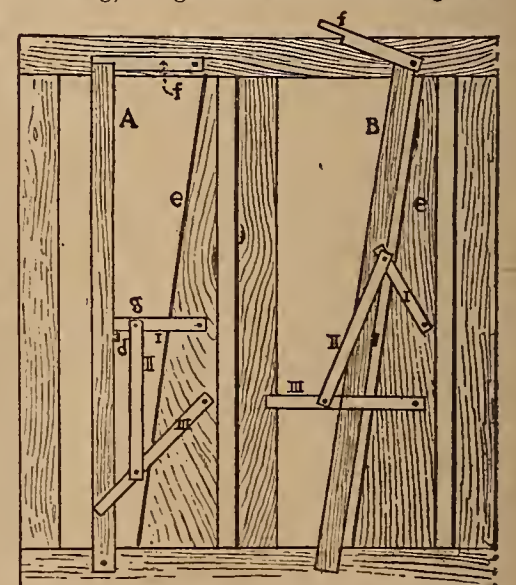
Ohio Experiment Station.

2

AN AUTOMATIC STANCHION

For cattle not dishorned the illustration shows a kind of cow-stanchion which is most excellent.

The pieces A and B are the movable parts, the first closed and the other open. The narrow strips I, II, III, each of which is two inches wide and three quarters of an inch thick, represent the apparatus by which the stanchions are operated. The pieces I and III are fastened to the immovable upright e, and connected through II by means of bolts, that at g, being fitted with a block against



AUTOMATIC STANCHIONS

which the upright A is to play when open, while the block d is to hold the strips in place when the stanchion is shut, the weight of the whole causing I to rest upon it. Thus, to unlock the stanchion one must lift this strip, which raises the other two, and push up the drop f; the upright A may then be pushed back and the animal withdraw her head. On the other hand, when she comes in and takes her place in the open stanchion she must press against lever III in trying to get at the feed below, and this causes the rests (II and I) to come down, and so brings upright A, by means of the block at g, into the place again, the drop f locking it so that the cow cannot get out until released by human hands.

FRED. O. SIBLEY.

NOTES FROM GARDEN AND FIELD

MICE IN GREENHOUSE AND KITCHEN.—Some time ago I recommended in these columns to kill the big field-mice which often get into our greenhouses, hotbeds, etc., and which hardly ever can be caught in baited traps or by shooting with a flobert gun. These mice often do wretched work. Recently I had some of them get into my mushroom-beds, and they were digging the beds up to their hearts' content without ever giving me a chance to get sight of them. You can't shoot at a creature that you never see. Then I happened to think of the new little trap that a western firm makes and puts on sale in our grocery and hardware stores. It is one of those little wood-and-wire devices that are set into the animals' runs without bait. It springs when the mouse runs over the trigger. This trap is just the thing to capture the large field-mice in our greenhouses and hotbeds. The ordinary house-mice are much more easily caught in ordinary baited traps. But if such traps fail (as they will in some cases) you can try this one, and will most likely succeed in catching the sly thing, if you will only set the trap where your game makes a practice of traveling along.

CATS FOR RATS.—My big barn used to be overrun with rats. I trapped them, shot them, even poisoned them, and yet all I could do was to reduce their numbers and make the remaining ones more cautious and shy. At first I could see the rats running all over the barn and in the granary any time of the day. After a few weeks of vigorous warfare the remaining rats (and they were mostly the old and experienced ones) kept themselves hidden during the day, and only came out at night. I had to build rat-proof bins in order to save oats, wheat, rye and corn from rat depredations. And I had to keep these bins carefully closed day and night, or suffer losses. At one time I got sudden and unexpected relief. A weasel made its appearance in the barn, and while it remained with me the rats all left for safer quarters with the neighbors. Then some of the boys thoughtlessly shot the weasel, and shortly afterward I had a new influx of rats, and they seemed to increase faster than ever. Then a neighbor's cat began to make regular visits to my barn. She was an experienced rat-catcher. As compensation for her welcome services I gave her a little new milk set in a basin in the barn every day so as to induce her to come regularly. (Of course, this was done with the neighbor's consent.) Finally there was a whole nestful of little kittens under the manger. The old cat stayed in the barn, and feasted on rats right along. Two of the kittens were allowed to grow up, and while still half-grown they learned the old cat's tricks. Ever since then I have kept from two to four cats in the barn, and mice and rats have almost entirely disappeared. The cats are not fed much except a little milk now and then, and they are never allowed to come to the house. Only in a few instances, when rats appeared in the cellar, one or two of the cats were shunt into the cellar over night. I do not think much of cats as pets and companions for children, but as rat-killers I find good cats a great success. None are more so than an old cat that is nursing a nestful of kittens, and is not fed much except some milk. But after all it seems to me that man's ingenuity should be able to construct a box into which even the shrewdest old rat could be coaxed without giving her a way out.

THE CATALOGUES.—The very first of this season's catalogues brought by Uncle Sam's mail were that of W. Atlee Burpee & Co. and that of J. M. Thorburn & Co. Burpee's is as gay as ever. It has plenty of color in its cover, in its plates, and even in the paper on which it is printed. What I like about this catalogue is that it is nearly free from exaggeration, the weak point of most gaudily colored catalogues. It pretends to "tell the plain truth about seeds," and then lives up to its pretensions in text and illustrations. One of Burpee's chief specialties is the sweet-pea. Many of my readers undoubtedly are acquainted with the Cupid, the white dwarf sweet-pea which Burpee & Co. introduced several years ago. Last year the same firm gave us the pink Cupid, and in this season's catalogue three new Cupids, differently colored, are offered. I can hardly say enough in praise of this new race or type of sweet-peas. My first experience with the white Cupid was unfortunate. The thing did not

seem to have much vitality. Then I planted it in the greenhouse in very rich soil, and here it has given me the greatest satisfaction for two seasons. I cannot imagine a more thankful flower for a cool greenhouse. The plants were a mass of bloom week after week and month after month. And the individual flowers (born in clusters of three) are marvels of beauty. The later introductions—pink, cream, rose, or whatever their color—are claimed to be more vigorous growers than the white, and, in fact, equal in this respect to the tall kinds, and just as much suited to open-air culture. I am satisfied with the white Cupid even as it is. No trouble for me to get an abundance of bloom when the plant receives proper treatment. I should add a good word for the ordinary sweet-pea as a plant for cut flowers from open ground in summer. I don't believe it has an equal for prolificacy and general satisfactory results. A well-kept row of some good kind or mixture along the garden fence or supported by a light trellis is a sight indeed.

Another of the valuable things which were introduced by Burpee & Co. is the Mammoth Gibraltar onion which this year I find catalogued as "Gigantic Gibraltar." It is the most gigantic onion that I know of, excelling in size and productiveness even the Prizetaker, and that will say a good deal. For my own special market (a home market) it is the most profitable of all onions that I have ever grown. People in this vicinity have learned to appreciate the mild flavor of this type of onions, and are willing to pay more for these large bulbs than we could possibly get for the ordinary stock. I now grow mostly this Gibraltar onion, at least for summer and early fall sales. It does not keep as well as the Prizetaker, and for late fall and winter sales I still have use for the old and tried Prizetaker. I hope, however, that before long I shall find a way to keep onions, by exposure to sulphur fumes in a kiln, or by other means, so as to kill the germ and prevent their growing and rotting.

NEW WINTER RADISH.—Burpee & Co. also offer a new winter radish under the name "Osaka." This radish was really magnificent, of mammoth size, white in skin and flesh, and very mild and tender. After awhile the radish lost some of its good qualities. That is, the seedsmen send out a different strain or degenerated seed, and the radish never earned the popularity which the original introduction deserved. I hope that this "Osaka" is the old California Mammoth as it was the year when first introduced. Notwithstanding the slight variation in shape, I believe it is, if it answers the description in Burpee's catalogue.

SOY-BEAN.—The soja, or rather soy, bean is also offered in the same catalogue as "the variety which has been extensively advertised as the so-called German coffee-berry." The fact in the case, however, is that there are quite a large number of varieties of soy-bean, and several of them have been advertised as "American coffee-berry." Last season I secured some from Mr. Root, which proved to be very early, the beans themselves being quite small. I believe with Mr. Burpee that the soy-bean can "be recommended as a useful forage-plant, and as worthy of a fair trial."

THORBURN'S CATALOGUE is one which I can never help but admire. It suits my taste, for it is plain and common sense in its whole make-up. It is not overloaded with pictures, and the pictures are not overdrawn. There are no colored plates nor gay-colored covers. But for completeness this catalogue will be hard to beat. It offers almost everything in the line of seeds—vegetable-seeds, flower-seeds, shrub-seeds, tree-seeds, and all sorts of agricultural seeds. As a sample of the really good information on general gardening matters which one can find in seedsmen's catalogues I will quote the following from Thorburn's:

DIRECTIONS FOR THE CULTIVATION OF VEGETABLES.—"To secure a good crop of vegetables three things at least are necessary; namely, a suitable soil, pure seed, and clean culture, to which may be added as equally necessary an abundant supply of good barn-yard manure, supplemented, when this runs short, by artificial fertilizers. The exposure of a vegetable-garden should be perfectly south or southeast, or nearly so. The soil should be naturally rich and friable,

a sandy loam being among the best. If the soil be stiff, it should be gradually mellowed by the free use of barn-yard manure, or if convenient, by the addition of sand. If wet, or inclined to hold an excess of moisture, it should be underdrained, preferably by tile; but if possible a location should be selected naturally dry and free from surface-water. A dark-colored soil, or one supplied with a goodly portion of decayed vegetable matter, will produce the earliest crops. . . . To produce the best and most uniform results the vegetable-garden should have at least one foot of good rich soil. The roots of large trees should not be allowed to encroach on any part of the garden, though large trees, especially evergreens, sufficiently far off, afford a valuable protection on the north and west." No need of going farther in quoting. Let each reader send for the catalogues of all leading seed-houses, and look up for themselves the valuable information they contain.

T. GREINER.

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THE NITROGEN SUPPLY OF FORESTS

The question is often asked how forests get their nitrogenous food in sufficient quantity to supply their needs. Recent observation has shown that it is obtained entirely or almost wholly from the air, not in the manner that leguminous plants, like clover, peas and beans, do, but by the deposition of hoar frost, of dew, the condensation of fogs and the fall of rain. The last three named have been understood for several years, but the observations upon hoar frost have only recently been made. This substance has been found particularly rich in nitrogenous compounds, the moisture in the air attracting them to it as it condenses, and holding them in the ice thus formed. The branches of trees in forests act as huge filters, removing from the air these substances, which are given to the soil when the ice thaws and drops or trickles to the ground. The quantity of hoar frost held by a branch is often greater than its own weight, and according to calculations from actual quantities measured, would give many pounds of valuable fertilizer to the soil at each frost. Thus during the summer and the winter the nitrogenous foods are being added to the soil directly from the air, and the soil of the forest is constantly becoming richer, because practically all of the leaves and other tree waste remain upon the ground to increase by their decay the quantity or both humus and nitrogen in it.

M. G. KAINS.

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A FRUIT-LADDER

Any farmer or bright farmer's boy who can handle a brace and bit can make a ladder which is almost necessary in picking fruit. Its manufacture is so simple that a glance at the illustration will suffice to show how it



is done. Select a good, straight cedar pole (cedar is very light, yet strong), peel it, and ring it near the small end or wrap it with strong galvanized wire. Line it off with a chalk-line, and bore the holes for the rungs. Then rip it down to the ring; this must be done carefully. Complete the operation by making and fitting the rungs, using some tough wood, such as white oak. After it is finished give the whole ladder a soaking coat of linseed-oil, after which it can be painted if desired. This will make a light ladder which can be inserted between the limbs of fruit-trees and poked up under the tree where an ordinary ladder would be useless or would greatly injure the branches.

The cedar pole will make the lightest and best ladder of this sort, but if it is not convenient to procure a pole, two strips of tough white oak one and one half by three inches, bound and screwed together at the top, will serve as sides for the same. In either case edges should be rounded off, to prevent injury to limbs of trees against which the ladder may rest.

GUY E. MITCHELL.

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BUG WAR IN WINTER

Much may be done to rid the orchard and farm of bugs while they are hibernating. Many borers may be found in dead and dying twigs such as currant, gooseberry, oak, etc. Raspberry-canes may be examined for the eggs of the snowy tree-cricket, currant-stems for those of a similar pest stuck into the wood, but visible upon inspection. The egg of the tent-caterpillar may be found upon many twigs. They look like a ban-

dage of brown-gold flannel. The eggs of plant-lice may be found close to the buds of apple-trees that have been infested with the adults the previous season. They are small, shining black ovals, and are laid near the ends of twigs. They are hard to kill in this form, but trimming and burning will do. Burning over infested fields will destroy hosts of insects in the chrysalis stage as well as the eggs of such insects as deposit them upon grass and such supports. The egg masses of the vaporier-moth may be found upon fences, tree-boxes and similar shelters, and as each mass contains a hundred eggs or more each one destroyed reduces the amount of work to be done in the eating season. The bag-worm may be found upon the arbor-vitae. It is readily seen and destroyed. It is in the form of eggs at this season. The pear-tree psylla may be combated in its winter home upon the trunks and branches of pear-trees. The rough bark should be scraped off and burned, and the body and limbs of the tree sprayed with strong kerosene emulsion. The pear-leaf blister-mite may be attacked at the same time. It hibernates upon the young twigs in the leaf-buds. For these two pests dilute the emulsion only about five times. Pile up and burn all twigs, limbs and branches that have dropped or have been pruned off trees and shrubs, since the former are almost sure to contain borers, and the latter may be the hiding-places of eggs or cocoons. The raking up of leaves and burning them will destroy many eggs and chrysalides, and, more important still, it will reduce materially the number of spores of plant diseases in and upon them. The same remarks will apply to the destruction of branches affected with such diseases as anthracnose. Time is less precious to the average fruit-grower during the winter, and he can make it pay him well to fight whenever opportunity presents itself.

M. G. KAINS.

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AROUND THE HOME

CRANDALL CURRANT.—I am pleased with what Mr. Greiner says of the Crandall currant. In fact, there is no such thing as the Crandall currant, or at least there are as many varieties as there are nurserymen selling it. By good rights it should be a very much improved Missouri ribes, or native yellow-flowering currant. I had a very good variety which I threw out to make room for the Crandall; but I lost a very good thing and got a very poor one. That which I now have is a sprawling suckering plant, giving a few large currants, of no quality, and not enough of them to mention. I have never seen but one Missouri ribes that was a really fine cropper, and that plant I believe is hopelessly lost.

SPRING WORK.—Get ready at this season for early spring work; that is, be ready to put it in at the very first break of spring. Be sure your wagons are ready, your harness repaired, your plows and harrows overhauled, so that there cannot be the least delay. Harnesses should be thoroughly oiled, and examined as to their ability to do another year's work. You will probably find in your buggies and wagons need of replacing broken screws, or some other item of repair, that can be done at home at this season of the year. If these matters are neglected till spring there will be no time to attend to anything and you will have to hurry them off to a shop at a useless expense. Look over your seed catalogues now, and make up your minds what will be needed to make your gardens a little better than last year. I find that it takes two months of solid work to get all things ready for outdoor spring work.

LAWN-TREES.—It is a very desirable feature of a home to have a few trees that hold their foliage much later than others. A good list of these, that do not drop their leaves until mid-November, includes the English elm, a noble tree everywhere, as green November first as in July; the English oak, which slowly browns its leaves through November, and holds them all the winter; and the copper beech, which makes only a small, round-headed tree, and is also very pleasant where our lawns are small. I notice that some of the catalpas are inclined to drop their foliage quite early, but there are others that hold it until very late. The cork-barked elm is a tree native to many sections of the North, but unlike our other elms, it holds its foliage after the rest are entirely defoliated. The persimmon is inclined to hold its leaves well into November. Were I planting large lawns I would have a grove of English elms for November.

E. P. POWELL.

PEASANTS OF DALMATIA

(Continued from page 1)

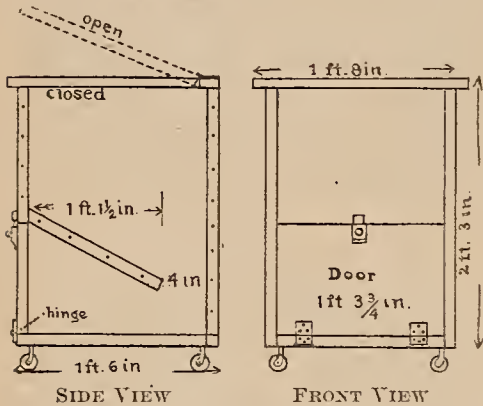
day and night, and gets small thanks for it, but much cursing and beating. She does this until she has a son old enough to bring a bride into the house, and then she practises the golden rule, and does others as she has been done.

The life of the Dalmatian peasant is a hard one. He lives on black bread and mutton, but seems to thrive on this simple diet. The monotony of his life is relieved by a wedding or a funeral, and occasionally by a fight, which often proves to be the last chapter of his uneventful existence. He always goes about armed, and he can handle a dagger better than a spade. The women do most of the field-work, and he goes out occasionally to see that it is well done.

Austria rules this little country with an iron hand, and there are more soldiers here than peasants, yet every once in awhile they rebel, and many an Austrian soldier has shed his blood upon the white chalk cliffs of Dalmatia, slain by the sharp dagger of a native. On the whole they are as noble and honest a people as can be found on the face of the earth, noble and honest in their own way, living up to the light they have with scrupulous exactness, which is more than the most of us can say.

COAL-BOX

I made a very handy coal-box for the kitchen. It saves the women of the house from lifting a heavy coal-bucket. It holds



about one and one-half bushels of coal. Any one with a few tools can make it. Its construction is fully explained in the accompanying illustration. Jos. G. REESE.

BEES—BIRDS—CATERPILLARS

BEES AND FRUIT.—In a recent issue of the FARM AND FIRESIDE Mr. Greiner takes issue with me as to the value of bees in orchards. I hardly supposed that any one would understand that I intended to teach that the mere placing of a few hives of bees in or near an orchard would insure a crop of apples. I have been careful to indicate that other conditions are also requisite. Bees gather honey, and do their work throughout a circuit of, sometimes, many miles. In a good floral section half a mile is a common honey flight. It would therefore be only necessary that some one half a mile or more away keep bees. But how will it work in case of almost continual showers? Bees start for home with a rapid flight at the first approach of rain. They will go only a short flight on showery days, and will work only in sheltered and low-headed trees. My nearest neighbor has a small orchard with trees standing very close and very low-headed, under the brow of the hill. He gets more help from my bees than I get myself, because my trees are more scattered and furnish the insects less protection.

I do not think I am placing too much emphasis on this help that the bees render an orchardist. Either we must give up the whole theory that pollenization depends on the work of insects, to a large degree, or we must yield the point that the presence of some millions of bees cannot fail to be of great value to us in bad years, and for those crops that are liable to destruction from frequent showers and high winds. Give them a place where they can fly at all, and they will put in half-hours between showers. It is quite true that other insects also help pollenization; no one will dispute that. But it is also true that the best of these are liable to hatch out earlier when there is an exceptionally warm April; and their lives are ended before apples bloom.

WINTER BIRDS are unusually abundant this season. Robins are feeding in my mountain-ash trees every few days. They are not solitary birds, but come in small flocks, or at least two or three together. I remember few winters for several years that a single robin has not occasionally been seen throughout the winter. But so far this season they are

quite common. I have not yet seen a pine-grosbeak, and would like to devise some means of securing their presence each winter. It is a superb bird. It is the only one that gets down to the ground and picks up the berries that it has dropped. The little chips come to the door every day, and are doing good service in the garden and orchard clearing out the eggs of insect pests. I observe that the winter birds all enjoy the berries of the mountain-ash, but the pine-grosbeak prefers those of the high-bush cranberry.

TENT-CATERPILLARS.—Fruit-growers must anticipate an enormous development of tent-caterpillars in 1899. Their eggs are glued not only on apples and wild cherries, but on the plum twigs and peach twigs and also on the pear. A large number of nests can be destroyed this winter by going around and removing them with the thumb-nail. After that most of those which hatch out should be immediately destroyed with the hand. If there are still nests out of reach apply the torch before they have developed and damaged the crop or tree. The only way to deal with these creatures is to deal promptly. E. P. POWELL.

NOTES FROM CORRESPONDENCE

FROM NEBRASKA.—Western Nebraska is settled mostly by people from Illinois, Iowa, Missouri and eastern Nebraska, who knew more about Latin than irrigation. After several years' successive failures a few faithful souls began preaching irrigation as our only salvation, and made a small canal as a sort of object-lesson, which others "seeing, took heart again," and each year added new tracts to that already redeemed by irrigation, as well as new converts. We finally sent a senator from Scott's Bluff, who secured the passage, in a modified form, of the Wright Law of California, which gave a great impetus to canal-building in all of western Nebraska where water is obtainable. This particular section is far in advance, being only second to Colorado, California and Utah. Most of our farms are assuming an old appearance, with groves and avenues of shade-trees, orchards of apple, cherry, plum and other fruit trees, bearing fruit. Large barns and frame residences are fast replacing the rude sod structures of the pioneer. Vast meadows of the luxurious and odoriferous Rocky mountain clover, alfalfa, enrich the autumn landscape, and evening breezes, varied by color of golden sheaf and waving maize. We produce nearly everything under irrigation which is adapted to eastern Nebraska. However, stock raising and feeding is our specialty. With millions of acres of free range for summer, autumn and spring, and a short and mild winter, we can defy the world to produce finer or cheaper beef. We are to have a railroad through Scott's Bluff next summer, and with it we look for a great rush of immigration, to settle up the now cheap and idle land lying under our good canals. At present we are handicapped by having to wagon everything for a distance of fifty to sixty miles. Everybody wonders that so good a town as our county-seat could "spring up" so far from a railroad. It has as fine churches, school buildings and residences as any other in the state, with fine brick business blocks, daily hacks both north and south, and long-distance telephone. Let me advise those with limited means and a desire to "rest under their own vine and fig-tree" to come West, where, with but a few hundred of hard-earned savings, they may secure a home. This may be the eleventh hour, but we "invite you to the feast." There are thousands of acres here that can be had cheap; you can enjoy good social surroundings from the start, and need not endure such privations as we pioneers did, who came here ten years ago. You can make a good living under irrigation from the start. A. V. F.

Gering, Scott's Bluff county, Neb.

FROM TENNESSEE.—I am located in the Sweet-water valley, near the Big Tennessee river. This river is navigable the year round, and gives us cheap transportation to the cotton country south of us, where all our grain and hay, mules, etc., find ready market at good prices. Eastern Tennessee is between the Cumberland mountains on the northwest and the great Smoky mountains on the southeast. Being surrounded by high mountains we have the finest climate on the continent, not so cold in winter nor so hot in summer as in Ohio, where I came from twelve years ago. We grow successfully all the crops grown in the northern states, and some not grown there. Winter oats sown in August furnish us fine pasture all winter, and then yield a heavy crop of grain. We grow peaches equal to Georgia, and apples much superior; berries and all small fruits grow to perfection. The farms here as a rule are too large to give best results, but where they are properly tilled they give excellent results. Some farmers grow as high as forty-seven bushels of wheat to the acre. People in the North who have no farms and some money could do well here; good homes are reasonably cheap. Early lambs can be grown here much cheaper than in the North, as we can have grazing all winter and can have eighty-pound lambs by June. Our sheep are running on pasture now every day. Several extensive sheep-breeder from Ohio are going to locate here and engage in sheep breeding and feeding. People afflicted with catarrh or lung trouble in the North are much benefited by locating here. London, Tenn. E. L.

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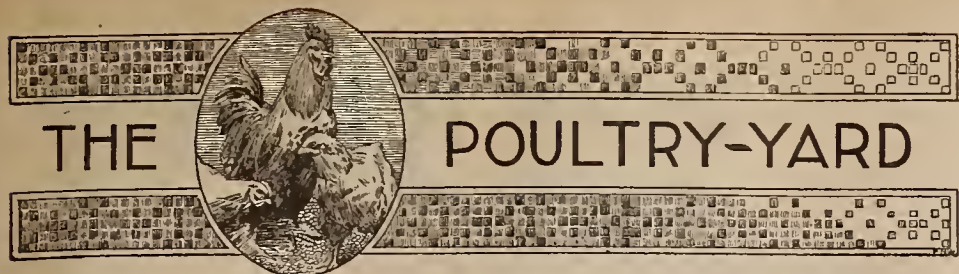
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Conducted by

P. H. Jacobs, Hammonton, New Jersey

FAT HENS AND CONDITIONS

CLOSE observation will soon teach the inexperienced that a hen is too fat when she is apparently very heavy behind, when she is lazy and cares nothing for work, seeking only to have the owner to feed her. She cannot easily fly, soon becomes tired from exertion when chased, does not lay, though in good health, and is very heavy when held in the hands. It may not be that any one of the above causes indicates a fat hen, but observe her in all of them. Of course, the surest method is to lift her, and the weight will be there. Examination of the body will also show the fat under the skin by its color. As to what should be the character and quantity of the food required to keep hens in a healthy condition, and not too fat, cannot be correctly stated, as no two hens are alike. Leghorns and Brahmias (or other large breeds) should not be kept together. If hens are in good condition the best food is all the chopped clover hay (chopped half an inch in length, and scalded) that they will eat in the morning, a tablespoonful of ground meat to each hen (moistened with mashed potatoes), and a little wheat scattered for them to pick up before going to roost.

UNIFORM PRICES

In some cities very early chicks sell in place of squabs, but they must be small, and weights less than a pound are preferred. The sum of fifty cents is usually the price for an entire stock, at all ages, until nearly grown. That is, they sell at about fifty cents a pound when a pound in weight. Then afterward, along in May, the preferred weight is one and one half pounds, the price being usually about thirty-five cents a pound, or about fifty cents for the chick. As June approaches, those of two pounds become more salable, the price in the neighborhood of fifty cents a chick still being maintained. And so the figures and weight keep apace, in contrary directions, until late in the fall, when the grown fowl of eight or nine pounds goes to market and brings about fifty cents. Of course, these figures are not strictly correct, as locations, markets and other causes may vary them in either direction, but they serve as an illustration.

DRAFTS OF COLD AIR

When the fowls seem unwell and the nostrils give a discharge, accompanied with heavy breathing, the cause may be due to a crack in the wall or overhead drafts. Some particular hen may be more susceptible to the influence of drafts than others. If readers will but consider that hens differ, some being more liable to diseases than others, they will be better able to understand difficulties that are met with. Even in a family where six or more children have the same parent they may differ, some being robust and others not. How much more so is this the case when a flock of six hundred hens is kept.

SOILING THE FOOD

Many in building make a shed between their houses, in which they put leaves to the depth of a foot or so, and when grain is scattered in this the hens will work nearly all day. In time, however, the leaves get fouled and broken up, and if not removed and renewed will soil the plumage of the hens, and not serve the purpose as well as the whole ones. In houses where the grain is scratched for the water-dishes must be placed in a small box or platform, and the dough put in boxes on the sides of the coop, high enough to escape the sand, for when the hens are hungry and in earnest they make the sand and dust fly in all directions.

DAMP WALLS OF POULTRY-HOUSES

Walls sometimes become damp even when the houses are not crowded, though in a majority of cases crowding is what does the harm. There is much in the wood of which the houses are built. Take an old house where the wood is well seasoned, and a new house, for comparison. The walls of the new house may be damp while the other house is dry. This may be explained by

stating that when the wood seasons the water evaporates, the grain becomes closer, and the boards less porous. If the wood is new the moisture enters on the one side as it leaves on the other, the particles not being close, and only until a dry season comes and the wood is fairly seasoned will the difficulty cease. Tarred paper should be used on the outside of the building, and not on the inside, as it then shields the wood against the storms which beat against it, and thus protects both outside and inside. Tarred paper being a cold substance when painted condenses moisture on its surface, and for that reason frost is noticed on the walls in winter, and even in summer, on damp days, some moisture may be noticed.

EGGS AND EXTRAS

It is not difficult to keep two or three hundred hens on a farm, and two or three hundred dollars thus picked up will buy all the extras which a farmer finds necessary to purchase during the year. In this way he need not go in debt for the numerous small things which cannot be produced on the farm, and which of necessity must be purchased. Every time he goes to town he can take chickens and eggs enough to pay for his purchase. It is the small things on the farm that run up the profit or the loss in the aggregate, and poultry-raising is one of the most important, though most neglected, industries on the farm. Other countries have found profit in poultry, and are now shipping to America to supply the demand which should be met right here at home.

HARD CROPS

Turkeys and chickens frequently eat substances that clog the passage leading from the crop to the gizzard, usually dried grass or long hay, or it may be old rope, wool, cotton, or anything of that character. The birds starve with full crops, and drink excessively. Finally fermentation of the contents of the crop takes place, and the birds die. The remedy is to make an incision in the crop, drawing the outer skin aside, removing the contents, and probing for the obstruction in the passage. Sew the skin with silk, tying the ends of each stitch together. Draw the outer skin aside so that the incision in the outer skin will not be exactly over that of the inner skin. Feed on stale bread, dipped in milk and squeezed, until the cut is healed.

WHEAT AND CORN

Corn, which has been the staple food for winter, has found a rival in wheat; but while wheat is quoted at a very low price, those who buy in very small quantities will find it still nearly up to old prices. The wheat sold for uses of poultry is usually of the lowest grade, but the retailers seem to make no difference on that account. While wheat is an excellent food when fed in connection with oats for spring, summer and fall use, yet we believe corn the best and cheapest during the very cold weather, as it is nearly always of better quality than the wheat sold to poultrymen.

TURKEYS IN WINTER

The common complaint against turkeys this season has been that they have been affected with swelled heads and eyes. This is due to the damp season and cold winds at night, and as turkeys seek the tree-limbs they are exposed. If the trees are protected by a barn, house or wind-break of some kind turkeys will usually suffer but little; but where not thus protected the roup will surely make its appearance at some time during the winter.

SELLING SCRUB STOCK

The best time to sell scrub stock is now, so as to make room for better kinds. It is not profitable to keep poor stock as long as something better can be obtained at but little additional cost. Those who make poultry pay use the pure breeds and avoid scrubs, as they well understand that in order to derive a profit they must resort to fowls that produce the most at the least cost.

CROSSING FOR PULLETS

Some farmers who do not have hens sit early enough to hatch pullets as soon as desired endeavor to gain maturity by using quick-growing breeds, especially of males. While it is better not to cross, yet the common flock can be improved by using pure-bred males. If the hens are large it will be a good plan to procure Brown Leghorn males to mate with them, as the half-bred Leghorn pullets resulting will mature early and begin laying nearly as soon as the pullets of the large breeds that were hatched a month earlier.

WARM FOOD

It is unnecessary to give warm food during the day, though early in the morning, when the hens come off the roost, on cold days a warm mess and warm water will invigorate them; but during the day the best way to keep them warm is to make them scratch and circulate their blood. It will be found best not to give a noon meal other than a tablespoonful of feed or wheat for a whole flock, so as to keep them at work.

CORRESPONDENCE

HATCHING AND FAILURES.—I have been much interested in your articles on poultry-raising, being in that business myself. After reading the articles "Why Hens Fail to Hatch" and "Hatching and Moisture" in your issue of December 1st I thought I would tell you a little about my experience in artificial hatching as compared with the hen. I believe nature makes no mistake in providing for the propagation of its species. The egg is either fertilized or not. If fertilized, a healthy hen, if not disturbed in her sitting, will produce a chicken from it. That there is an imperfect fertilized egg is an assertion with no proof behind it, because there is no way of telling that the germ was not destroyed by means not of nature's design. Like the human race, some hens are of a nervous disposition and are easily disturbed, and will leave their nest under a slight provocation, and the germ of the egg is easily destroyed. Last summer, while feeding my hens, I saw one fly from under a wild-rose bush, and after I was through feeding I went to the hush to look for her nest. I found it in a nice place for hatching, and approached it very carefully so as to not disturb anything. There were thirteen hen's eggs in it, and in the center of them all there was one quail's egg. I carefully picked out the quail's egg, carried it to the house, and showed it to my wife. About ten days after I went to see how my hen was getting along, to find she had not been on the nest since I removed the quail's egg. I examined the eggs and found them all good. Some hens I find will leave their nests to eat every day from the time they first begin to sit until the hatching commences, and bring out a full brood. While they are off the nest the eggs will cool down to from sixty-five to seventy degrees. This, I think, is a kind of acclimating procedure of nature to prepare the chick to meet the different temperatures of atmosphere he will be exposed to after leaving the shell. The hen, in returning to her nest after the eggs have cooled down to about seventy degrees, approaches carefully, and first spreads a cushion of feathers over them, then on the feathers she places the heater that under no circumstances can exceed the normal heat of her body, which we will call 103 degrees. With incubators, from the sixth to the tenth day I remove all the infertile eggs and all those that have had the germs killed by the process of the incubation. Then after the hatch is over I count the chicks and see how many have survived the ordeal. Then I examine the eggs that did not hatch, and find that the killing process was kept up until the day of hatching.

A. W. A.
San de Fuca, Wash.

INQUIRIES ANSWERED

Meat and Clover.—W. A., Bloomington, Idaho, writes: "Does it pay to feed fresh meat and second-crop clover to fowls?"

REPLY:—It will pay to feed those substances, as they promote egg production and conduce to the thrift of the fowls.

Hemorrhage.—N. B. H., Omaha, Neb., writes: "What does blood in the droppings indicate? I lost a valuable fowl suddenly."

REPLY:—It may be due to several causes, such as rupture, falling from roosts or the swallowing of some injurious substance, fat hens being more liable to such difficulties than others.

Douglas Mixture.—M. L. C., Lowell, Mass., writes: "Please give formula for the well-known Douglas mixture."

REPLY:—Dissolve one pound of copperas in one gallon of water, and then add one ounce (about a gill) of sulphuric acid. Keep it in a jug, and add one teaspoonful of the solution to every half gallon of the drinking-water.

Feathers.—J. M. M., Jacksonville, Ill., writes: "What is the chemical composition of feathers? Is there any special food that will hasten the period of molting to make it a more healthful natural process?"

REPLY:—Feathers are highly nitrogenous, with a proportion of phosphate of lime, their exact composition depending upon from which portion of the body they are taken. Oily foods, such as linseed-meal, sunflower-seeds, etc., assist the molting and hasten the process.

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QUERIES

READ THIS NOTICE

Questions from regular subscribers of FARM AND FIRESIDE relating to matters of general interest will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should inclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Absorbent for Poultry Droppings.—S. B., Athol Centre, Mass. Do not use lime nor wood-ashes. Use dry earth and gypsum, or land-plaster, and use them freely.

Idaho Pea.—Many inquirers. Send to the Department of Agriculture, Washington, D. C., for "Grain, Chick-pea, or Idaho Pea," a circular giving a brief history and description of this plant and its uses.

Alfalfa.—F. F. J., Mulhall, Okla., writes: "Kindly inform me when to sow alfalfa-seed, how much to the acre, and how the ground should be prepared. Which is the best, spring or fall sowing? Can you tell me if there is more than one kind of alfalfa?"

REPLY:—Sow alfalfa in the spring as soon as danger of hard frost is passed, on ground prepared as for oats, using about fifteen pounds to the acre. We know of only one variety of alfalfa. It has another name—lucerne.

Fertilizer for Clover-seed.—E. M., Verdella, Mo., writes: "Please tell me what is the best fertilizer to use in putting in clover-seed with oats?"

REPLY:—The best fertilizer to use depends on the needs of your soil, which you must determine by experiment. A light top-dressing of stable manure will give good results, and you may experiment with applications of gypsum and lime. There is some risk in sowing clover-seed with oats. Better sow it on winter wheat.

Leaming Corn.—Many inquirers. Leaming is an old, standard variety of yellow corn. It is large-growing and very productive. On account of the time required for it to grow to maturity it is not adapted to the higher latitudes, in which only the early-maturing varieties should be planted south of the latitude of central Ohio; it is reliable in all seasons, and a favorite variety. Send to the seedsmen who advertise in the columns of this paper for their catalogue; Leaming is listed in a number of them.

Salt for Asparagus.—Mrs. J. N. B., Lynn, Mass., writes: "Please state in your paper how much salt is required for an acre of asparagus."

REPLY BY T. GREINER:—None, that I know of. You can grow excellent asparagus without using a bit of salt. Make the ground rich enough, and give to each plant room enough, and you will have solved the problem of "how to raise good crops of asparagus." On the other hand it will do no harm to apply even large doses of salt to the asparagus-bed. You will not be liable to kill the plants, nor even hurt them. They can stand any amount of salt that you would be liable to put on, and in some cases the salt may act as an indirect fertilizer, acting somewhat in the same way that lime does. In most cases the beneficial effects of salt, especially near the sea-coast, are too slight to be worth mentioning.

Weed-seed.—L. A. S., Wytheville, Va., writes: "If we clear a piece of new land in this state, the first year it will grow up with butterweed. Where did the seed come from, or when did it get there? Also a wheat-stubble will always grow up with ragweed even if new land, too. Now, when did the seed get there, and how?"

REPLY:—The seeds of many common weeds possess wonderful vitality, and remain dormant in the soil for years, but are ready to grow at the first opportunity under favorable conditions. Just how and when the weed-seeds were distributed over the new land you may not be able to find out. Some weed-seeds are distributed by the wind; others, by birds or animals. But on one fact you may rest assured, all weeds you see grew from seed. Clearing the land made the conditions favorable for the sprouting and growth of seeds in the soil.

Potato Queries.—E. T. M., Preston, Md., writes: "My farm-land is light, or sandy, with a good clay subsoil. I have one field that was pastured last year, that had a good stand of red clover on it, but was pastured close. Another field has a good stand of scarlet clover on it now. The two fields are about the same quality. Now, which would you put in potatoes? Would you manure the land broadcast this winter or put the manure in the furrow? Would you use phosphate? If so, how much, what kind, and how would you apply it? What kind of seed-potatoes would you plant for market, and at what time of year would you plant them?"

REPLY BY T. GREINER:—I should think that the two pieces would be about equally well suited to produce a crop of Irish potatoes. If I could examine the soil on both I would probably be able to make a selection. Am almost leaning to the red-clover piece. If you have old manure, by all means put it on the land at once, broadcast. Don't use the manure in the furrows. Possibly one or two hundred pounds of dissolved phosphate rock (superphosphate), and a hundred pounds of muriate of potash, applied broadcast, to the acre might give you good results. As to variety for market it depends on the local conditions. Perhaps Bliss Triumph is what you want. I prefer Early Ohio for my purposes (early market). Plant as soon as danger from late frosts is over.

VETERINARY

CONDUCTED BY DR. H. J. DETMERS

To regular subscribers of the FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Veterinary queries should be sent directly to Dr. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE:—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered.

Infectious Abortion.—G. M., Hay Springs, Neb. Please consult answer given under above heading to J. R., Glen Este, Ohio, in FARM AND FIRESIDE of December 15, 1898.

Passes Blood.—R. M., St. Helena, Cal. You say your cow passes blood twice or thrice a day. Have your cow examined and ascertain the source of the hemorrhage, because no rational treatment is possible as long as the source and the cause of the bleeding remain unknown.

Either Mangy or Full of Fleas.—A. W., Perkins, Ohio. According to your statement it must be presumed that your dog is either mangy or full of fleas. If he is such a valuable animal I advise you to have him examined by a veterinarian, and if found to be mangy, also treated by a veterinarian.

Blind.—I. O., Secor, Ill. You say the horse suddenly lost his eyesight immediately after a runaway. If such is the case, and the eyes do not show any opacity or nothing conspicuously abnormal, it very likely is a case of amaurosis (paralysis or atrophy of the optical nerves), and is incurable.

Repeated Attacks of Garget.—W. A. F., South Bend, Ind. Yes, you may expect to again be bothered with a case of garget in your Jersey cow when she is in full milk and in a good pasture, unless you relieve her often enough by more frequent milking than twice a day. Consult answers to garget questions in recent numbers of this paper.

Cough.—C. D., Roanoke, Va. Coughing, as has been repeatedly stated in these columns, is a symptom of the most common occurrence in almost all diseases and affections of the respiratory organs, and it is therefore utterly impossible to base a diagnosis upon this one symptom alone. May be that your horse is affected with so-called heaves. Have him examined.

An Eye Knocked Out.—W. S., Danville, Ill. You say that your cow had an eye knocked out about one year ago, and that now a (malignant) morbid growth occupies the empty socket. This growth has to be removed either by means of a surgical operation, by means of caustics or probably by both means combined. Employ a veterinarian to perform the operations necessary and to superintend or direct the treatment required after the operation has been performed, and do not meddle with it yourself.

A Spur.—A. H., Swiss Alp, Texas. The horny formation at the fetlock of your horse is a so-called spur and a normal product, found often very large and conspicuous in cold-blooded horses, and absent or nearly absent only in warm-blooded animals. If these formations, as they sometimes do, should grow too large or unsightly they may be trimmed from time to time, but care should be taken not to cut them too close to the skin, for doing so is apt to produce a very ugly sore. The trimming can be easily done with a pair of pruning-shears.

Tuberculosis.—S. K., Mt. Carmel, Ill. The safest, best, most reliable, and let me say, under the circumstances, only means of detecting the existence of tuberculosis in cattle, especially if yet in the first stages, is to subject the whole herd to the tuberculin test, to be applied by one (preferably a veterinarian) familiar with all the particulars of its application and the effect of the tuberculin upon diseased and upon healthy animals. The prevention of the disease consists in removing every source of a possible infection. There is no cure.

Probably a Case of Blind-staggers.—H. A. N., Olivia, Minn. What you describe appears to be a case of so-called blind-staggers, an incurable disease. Such a horse should never be used on the road or anywhere where an attack, of which nobody knows beforehand when it will make its appearance, may endanger human life. Hot weather, severe exercise—that is, exercise severe or lasting enough to cause perspiration in a healthy horse—are always apt to bring on attack, therefore one cannot be too careful in working and handling such an animal.

Severe Burns.—J. A. F., Chicova, Pa. It would have been much better if you had used a mixture of oil and lime-water, equal parts, instead of linseed-oil and lard, on the burns of your horse. If more than half of the surface (skin) of the animal was burnt, the latter will die or rather be dead before this reaches you. Whether any hair will return on the burnt parts of the skin, if the animal survives, will depend upon the depth of the burns. The roots of the hair, just the same as the skin itself, will not be reproduced if once destroyed, and scar-tissue, not capable of producing hair, will take the place of the destroyed skin.

Worms.—J. M. F., Marlboro, N. H. Your cats are infested with worms which produce the symptoms you describe and cause the cats to die. Get for each cat, according to size and age, from one to two grains of santonin from a druggist, mix each one separately for each cat with a little honey, or if that is not obtainable, with a little molasses, and smear the mixture on the fore leg or any other part of the body of the cat where the latter can lick it off, which will soon be done unless the cat is already dying. It is possible that

a second dose may have to be given a few days later, and if the source from which the worm-brood, possibly mice or rats, is not closed the doses may have to be repeated from time to time.

Cribbing.—M. N. B., Sand Creek, Wis. Cribbing, as you correctly call it yourself, is a habit, and in so far as a very bad one, as a confirmed cribber cannot be broken of it. It is not a disease. It is usually the most active horses that acquire the habit, if they have insufficient employment, or see another older horse exercising the bad habit of cribbing. The most objectionable cribbers are those which take hold of the edge of the feed-box when having a mouthful of grain, and thus throw the grain away. One not already a confirmed cribber will in some cases cease to exercise it if a strip of sheepskin with the wool on is tacked over the edge of the feed-box, provided that everything else that may serve to be taken hold of is removed.

Hoof-bound.—J. R. S., Santaquin, Utah. If your horses were simply hoof-bound—had contracted hoofs—I would advise you to let him either go barefooted or have him shod with shoes that will cause a gradual spreading of the contracted quarters, and then to have the shoes reset at least once every four weeks. But you say your horse is badly hoof-bound in his front feet, and his fetlock-joint "has slipped ahead," therefore I must presume that something else is the matter, and that your horse perhaps has badly contracted tendons, and in consequence of that walks on his toes instead of being hoof-bound. Either give a plain description of your case or have your horse examined by a competent person, and thus learn what really is the matter.

Lousy Calves.—F. J. B., Wheatland, Iowa. You can free your calves from lice if you wash them, first, in a thorough manner with soap and warm water, and then, before they are perfectly dry, with a four or five per cent solution of creolin in warm water. A tobacco decoction also will destroy the lice, but the same is not without danger if applied to animals that are very poor or have numerous sores. The washing with the creolin solution or with the tobacco decoction has to be repeated in about five days, but the treatment will be of very little and of no permanent benefit unless the stable and stable utensils (particularly brush, currycomb, etc.) are thoroughly cleaned and disinfected, and all bedding and manure on or in which lice and nits may have been deposited are removed or destroyed at each washing. It will further be necessary to put the calves on a liberal diet of good and wholesome food, or of food that will improve their general condition, for it is an old and well-known truth that all parasites thrive and propagate the more the weaker the organism of their host, but cannot make much headway and seem to feel uncomfortable if their host is vigorous and thrifty. Animals that are well kept all the year round are seldom troubled with lice.

Probably a Case of Botriomycosis.—J. C. L., Bromley, Iowa. What you describe appears to be a case of botriomycosis. Try the following: Get in a drug-store a mixture prepared composed of half an ounce of powdered arsenious acid, two drams of caustic potash, half an ounce of powdered gum acacia and one ounce of distilled water, and have the mixture, which will be thick and semi-fluid, dispensed in a salt-mouthed vial and labeled: "Poison! For external use!" Then prepare a wooden spatulum, say three quarters to one inch wide and one eighth of an inch thick, with a handle of convenient length. This spatulum must be of a width to pass easily into the mouth of the vial. Dip the spatulum into the mixture, and with it smear a thin and rather uniform layer of the mixture over the whole surface of the tumor, so as to cover every part of it, but be exceedingly careful to bring it in contact with nothing else, neither with the skin of the horse nor of your hands. Having applied such a coat or layer of the mixture as uniformly as possible over the whole surface of the tumor, cover the latter with a tuft of absorbent cotton which will adhere to the sticky layer. Having thus finished the operation, tie your horse in such a way as will make it impossible for him to get at the tumor with his mouth. Destroy at once the rest of the mixture left unused. If the whole operation is well performed one application will suffice; if not, it is advisable to procure fresh material for the second application. You are mistaken when you say that questions like yours have never been answered.

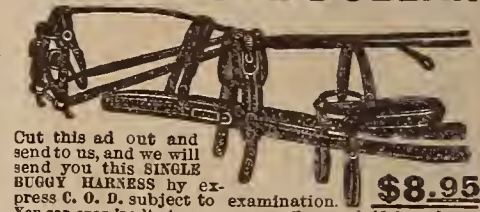
Contracted Flexor Tendons.—W. A. S., Humboldt, Tenn. The peculiar action of the fore legs of your Jack-colt, it seems, is the consequence of a serious contraction of the flexor tendons. There is but one remedy, but whether it will pay you to apply it is another question. It consists in a subcutaneous cutting of the flexor tendons, first on one leg, and about two months later on the other one, because if both legs were operated on at once the animal would not be able to stand. After the operation has been performed, the operated leg or foot has to be kept in proper shape by suitable bandages until a healing has been effected and the leg has again become strong enough to support the weight of the animal. As this requires about two months, and as the operation cannot be performed on the second leg until the first is able to support the weight of the animal without injury, and as the second leg will require just as much time to become serviceable as the first, the whole treatment, barring accidents, requires at least four months. If the fact that an animal once thus affected as your colt, even if by means of such an operation restored to an apparently normal condition, will ever afterward be a very undesirable animal for breeding purposes, notwithstanding that his descendants will only be mules, is taken into consideration, it is rather doubtful to my mind whether the colt will afterward be worth the treatment.

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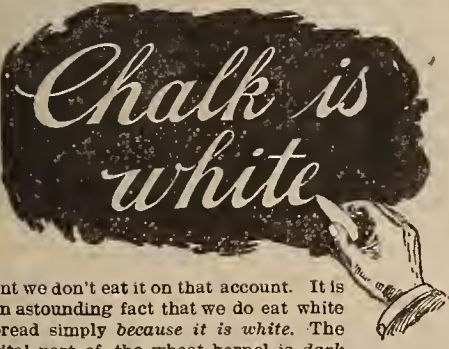
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You want the best, the one that relieves and cures. Which is it? Allcock's! Why? Try it, smell it, compare its fine aromatic odor with the smell of all other plasters. They all smell alike, a nasty, sweetish odor because they are made of cheap materials. We guarantee Allcock's Porous Plasters to be made of the highest-priced and purest of drugs. Don't be buncoed. Get the best—Allcock's.



but we don't eat it on that account. It is an astounding fact that we do eat white bread simply because it is white. The vital part of the wheat kernel is dark colored, and to make white flour it is almost entirely discarded. On the contrary the

Franklin Mills Flour

A FINE FLOUR OF THE ENTIRE WHEAT

is produced from the entire wheat berry denuded only of the woody, innutritious, indigestible outer skin or husk, which is not food.

If your grocer does not keep it, send us his name and your order—we will see that you are supplied.

See that the Flour delivered bears our label; avoid substitutes. Booklet Free.

The genuine made only by the
FRANKLIN MILLS CO., LOCKPORT, N. Y.

\$1.95 BUYS A \$3.50 SUIT
8,000 CELEBRATED "KANTWEAROUT" double seat and double knee. Regular \$3.50 Boys' 2-Piece Knee-Pant Suits going at **\$1.95**.
A NEW SUIT FREE for any of these suits which don't give satisfactory wear.
Send No Money. Cut this Ad. out and send to us, state age of boy and say whether large or small for age and we will send you the suit by express, C.O.D., subject to examination. You can examine it at your express office and if found perfectly satisfactory and equal to suits sold in your town for \$3.50, pay your express agent our special offer price, **\$1.95** and express charges.
THESE KNEE-PANT SUITS are for boys from 4 to 15 years of age, and are called everywhere at \$3.50. Made with double seat and knees, latest 1899 style as illustrated, made from a special wear-resisting, heavy-weight, ALL-WOOL Oakwell cassimere, neat, handsome pattern, fine serge lining, Clayton patent interlining, padding, staying and reinforcing, silk and linen sewing, fine tailor-made throughout. No boy or parent would be proud of. **FOR FREE CLOTH SAMPLES** of Boys' Clothing (suits, overcoats or ulsters), for boys 4 to 19 years, write for Sample Book No. 90C, contains fashion plates, tape measure and full instructions how to order.
Men's Suits and Overcoats made to order from \$5.00 up. Samples sent free on application. Address,
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\$65 Kenwood Machine for.....\$22.50
No better Machine at any price.
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We are giving away watches, cameras, solid gold rings, sporting goods, musical instruments & many other valuable premiums to boys and girls for selling 18 packages of Royal English Ink Powder at 10c each. Every package makes 50c worth of fine ink. We ask no money—send your name and address, and we will forward you 18 packages with premium list and full instructions. When you sell the Ink Powder send the money to us and select your premium. This is an honest offer. We trust you. Don't lose this grand opportunity. Write for the outfit today. Address all orders to Imperial Ink Concern, 62 Adams St., Oak Park, Ill.

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A Turkey Red!
on Cotton Fast to SUN, AIR, SOAP, and ACIDS is made with new "PERFECTION" Dyes. Twice the strength of other brands. Simple; sure; no dull, dingy, or uneven effects. All Colors Guaranteed. A large package, to color 2 to 4 lbs. goods, by mail, 10 cts.; 3 for 25 cts.; or 6 for 40 cts. Your choice of 70 popular colors. New catalogue and sample cards FREE. Agents wanted. **W. CUSHING & CO., Box W, Foxcroft, Maine.**

EVERY WOMAN
Can buy a **WORLD'S WASHER** on trial and no money paid until it is perfectly satisfactory. Washes easy. Clothes clean, sweet and white as snow. Child can use it. 1 c. freight. Circulars free. **C. E. ROSS, 10 Clean St., Lincoln, Ill.**



OUR SUNDAY AFTERNOON

LIFE'S VICTORS

I sing the hymn of the conquered, who fell in the battle of Life—
The hymn of the wounded, the beaten, who died overwhelmed in the strife;
Not the jubilant song of the victors, for whom the resounding acclaim
Of nations was lifted in chorus, whose brows wore the chaplet of fame,
But the hymn of the low and the humble, the weary, the broken in heart,
Who strove and who failed, acting bravely a silent and desperate part;
Whose youth bore no flower on its branches, whose hopes burned the ashes away,
From whose hands slipped the prize they had grasped at, who stood at the dying of day
With the wreck of their life all around them, unpitied, unheeded, alone,
With Death swooping down o'er their failure, and all but their faith overthrown.

While the voice of the world shouts its chorus—its psalm for those who have won;
While the trumpet is sounding triumphant, and high to the breeze and the sun
Glad hammers are waving, hands clapping, and hurrying feet
Thronging after the laurel-crowned victors, I stand on the field of defeat,
In the shadow, with those who are fallen and wounded and dying, and there
Chant a requiem low, place my hand on their pain-knotted brows, breathe a prayer,
Hold the hand that is helpless, and whisper, "They only the victory win
Who have fought the good fight, and have vanquished the demon that tempts us within;
Who have held to their faith unswayed by the prize that the world holds on high;
Who have dared for a high cause to suffer, resist, fight—if need be, to die."

—W. W. Story.

A HARD FIGHT

THERE is a certain class of people whom we are all tempted to envy—those who, as we say, "have such an easy time." They have no burdens to carry, no storms to encounter, no battles to fight. All about them is peace and comfort, and over their heads the sky is always blue. While we are quite young we expect to see representatives of this class on every hand, but as we grow older our estimate of its numbers is constantly changing. We discover that the rich man, whose wealth we envied, is lonely and friendless; that the woman who had so much leisure on her hands is the victim of an incurable disease, and is never out of pain; the poet, whose reputation seems to us the most desirable thing in the world, has won fame through putting into words the anguish of his own breaking heart.

"Be pitiful," one of the leaders of modern religious thought has said, "for every man is fighting a hard battle." Evidently in his wide experience he has failed to make the acquaintance of the people who have easy times. One cannot always tell with what opponents his neighbors are contending, whether with disease, or poverty, or temptation, or any of a thousand other foes. The heart knoweth its own bitterness. Outsiders can only frame poor guesses. But it is safe to expel all envy from the heart, and keep it sympathetic and pitiful, like the heart of our Heavenly Father, who, seeing the hard fight each man must make, and his wayward children most of all, is full of compassion and the mercy that endureth forever.

HUMILITY AND HUMILIATION

Where there is true humility there will never be humiliation, for God has promised to axalt the lowly and debase the proud. The humble man has an invincible patent of greatness, for he is superior to every outward condition of life. He will not be moved from his integrity by success, nor be cast down by failure.

There is no real humiliation save that which comes from within. No outward circumstances can humiliate a soul serenely poised. There is nothing in the whole world that can debase or lower a man resting in the truth. He moves on his grand way absolutely indifferent to the petty meannesses that annoy lower natures. He is like a prince who cannot notice the sneers and scoffs of the rabble.

"I cannot do this work," said a young woman who was suddenly thrown upon her own resources, "it is so humiliating. What would my friends think to see me, with my splendid education, doing kitchen-work?"

But was not the idleness and dependence on friends, while awaiting a position that would not wound her pride, the really humiliating thing?

No honest labor can humiliate. The fine education and gentle manners will elevate your sphere. Your work cannot lower you unless you have first consented with your soul to leave that higher plane where it is your right and duty to dwell. Let us do away with these false distinctions.

Remember that the real humiliation is the unkind word, the impure thought, the look of scorn, the loveless heart, the soul that refuses to acknowledge its God; these are the things that debase. Flee from them and place your soul above the power of the world and the things of the world.—Christian Standard.

NERVOUS CHILDREN

A word about nervous children. Never scold them nor "make fun" of them. They suffer enough without your threats or sarcasm. Pretend not to see their awkwardness when in company, nor their grimaces when alone. A case was reported the other day of a boy of ten years who, on being vexed, and often without apparent provocation, will clench his hands and make the most frightful contortions of the muscles of his face and head till his poor mother fears he is idiotic. By no means. He is the brightest boy in his class at school, fond of reading and of natural history, but he is of highly nervous temperament, and has not been taught to control the little wires, so to speak, on which he is strung. This is no single case. There are thousands of children who give way to their nerves in similar fashion. Talk to them about these curious little fellows that should be their servants, not their masters. Never whip them. The man or woman who whips a nervous child is on a level with brutes that have no reason. Encourage them. Help them. Be patient with them. They are the making of our future successful men and women, for they will work hard at whatever they undertake. Brace up your own nerves first, and then be indulgent toward the capers of your over-nervous children.—Home Comfort.

THE DEPTH OF LIFE

It is a great thing—yea, more, the great thing—to live a life deeper than the surface of things, a life which shall carry all the circumstances and the vicissitudes of material things like froth on the steady flowing volume of its spiritual experience. How easily we forget that all these physical possessions, conditions, affairs, are not substance, but shadow; that all wealth and power and joy and life is not objective, but subjective! How we run after shadows! How we search for the fountains of delight all abroad when, behold, they are all within! We strive to gather in to ourselves, when our only possible way of growth is to spend ourselves. The grasping miser is a fool. The martyr is the only true and practical philosopher. Yes, we see it, we know it, some of us; but here the inexplicable perversity of the human heart shows itself. I wish I were able to eradicate it, to do my best to take care of those whom God has given me, and then be just as happy in the storm as in the sunshine. I wish I were able to find delight neither in the storm nor in the sunshine, but in that exercise of the ineffable powers of the soul which transcends both.—Irving L. Stone.

BE THANKFUL FOR WHAT YOU HAVE

Billy Bray, the Cornish miner whose rugged piety has been a blessing to so many of God's children, says that one year his crop of potatoes turned out poorly; and as he was digging them in the fall, Satan was at his elbow, and said, "There, Billy, isn't that poor pay for serving your Father the way you have all the year? Just see those small potatoes."

He stopped hoeing, and replied, "Ah, Satan, at it again; talking against my Father, bless his name! Why, when I served you I didn't get any potatoes at all. What are you talking against Father for?"

And on he went, hoeing and praising the Lord for small potatoes—a valuable lesson for us all.—D. W. Whittle.



The face is an index of character—and the truthful times shown on the face of a

Ruby Jeweled Elgin Watch

proves the character of its mechanism—The most complete watch factory in the world, in machinery and equipment—the most careful selection of materials—thoroughly skilled and drilled mechanics—extreme care in minutest details—(over thirteen hundred and fifty distinct operations are necessary to produce a single Elgin watch)—a third of a century's experience—every movement tested and proven before it leaves the factory—these are the things that combine to produce the Elgin Watch,
The World's Standard.

An Elgin Watch always has the word "Elgin" engraved on the works—fully guaranteed.

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A Child's All-Wool Suit \$1.90

Made from Remnants of our Fine \$2.00 and \$3.00 nylons which were left over from our Great Tailoring Department. \$1.90 don't pay for the cloth, to say nothing of the making and lining. Order today before they are all gone.
REMNANTS will accumulate in our large tailoring store—do what we will we can't avoid them. Upon taking stock recently we found on hand over 1,800 remnants, in each of which there was enough material to make a child's suit. The cloths consisted of genuine imported all wool English cassimeres and Scotch chevrons—all medium & dark shades, in beautiful mixtures and neat check patterns. None of the cloth cost less than \$2.00 and up to \$3.00 a yd. We made every remnant into knee pants suits (like cut) to fit boys from 4 to 15 years old, and now offer them for the wonder price of \$1.90. The suits are splendidly tailored, perfect in fit and style and are guaranteed fully worth double our price.
\$1.90 SEND NO MONEY but send this adv. with choice of shade and pattern; give age of boy, state if large or small for age and we'll send the suit C.O.D. by express, and allow you to try it on the boy before you pay one cent. If just as represented and worth double our price then pay the express agent \$1.90 and express charges. Pay nothing if unsatisfactory. Write for free cloth samples of suits for boys from 4 to 19 years old.

The **LOUIS Z. VEON CO.** 155 W. Jackson St. Chicago, Ill.

SOLD!
UNDER A Positive Guarantee
to wash as clean as can be done on the washboard, even to the wristbands and collar of the dirtiest shirt, and with much more ease. This applies to **Terriff's Perfect Washer**, which will be sent on trial at wholesale price. If not satisfactory, money will be refunded. Agents wanted. For exclusive territory, terms & prices, write **Portland Mfg. Co., Box 4, Portland, Mich.**

THROW AWAY YOUR HAT PINS
The Ideal Hat Fastener is a perfect device for holding the hat on the head without a pin, no matter how hard the wind blows. Just the thing for cyclists, in fact, every lady, young or old. Price 25 cents, by mail. Agents wanted.
IDEAL FASTENER CO., Station N, CHICAGO.

NO DIRT LEFT
in clothes washed with the "BUSY BEE WASHER" 100 pieces in one hour and no hard work done. That is the record. **AGENTS WANTED.** Exclusive sale. Write for terms, **Lake Erie Mfg. Co., 116 E. 13 St., Erie, Pa.**

Send 2c. for our fine **SAMPLE BOOK** of all the Latest Genuine Bevel-edge, Silk Fringe, Envelope, Hidden Name, Calling, Sun Photo & Ribbon Cards with Agent's Outfit & Premiums for 1899. **BUCKEYE CARD CO., B9, LACEVILLE, OHIO.**

ONE YEAR FOR 10 CENTS
We send our monthly 16-page, 48-col. paper devoted to Stories, Home Decorations, Fashions, Household, Orchard, Garden, Floriculture, Poultry, etc., one year for 10 cents, if you send the names and addresses of six lady friends. **WOMAN'S FARM JOURNAL, 4311 Evans Ave., Saint Louis, Mo.**

SPECTACLES at wholesale. Send wanted. **COULTER OPTICAL CO., Chicago, Ill.**



THE POFFENBERGERS GIVE A VALENTINE PARTY

DO YOU want to give a valentine party—something new and decidedly unique? Then follow this program.

The Poffenberger girls decided to give a valentine party. As they never do anything by halves, the party was planned months before, and the invitations issued were things of beauty. On the back of each envelope was painted a Cupid with his hands behind him. There were thirty-four invitations issued, seventeen to ladies and seventeen to gentlemen, and the list included all the young people of the neighborhood. On the card inside was the same Cupid in a state of hearty enjoyment. Sometimes he had a string of hearts, sometimes but one; sometimes he coquetted, sometimes he frowned; sometimes he was running away from a heart, sometimes he was running after one; sometimes his bow was bent, sometimes relaxed. Each card bore this verse traced in gilt letters:

Ho! lasses and lads, our greeting we send.
To Poffenbergers' home you must go;
St. Valentine passes that way the fourteenth.
And you don't want to miss him, you know.
It will be a full year ere he'll fare forth again,
With Cupid for company, 'tis said.
All-Hallowe'en told you your true love, I'm sure.
But St. Valentine tells whom to wed.

Every invitation was accepted, and hours being somewhat early in the country districts, the guests began to arrive about half-past seven. As each gentleman entered the parlor he was met by a young lady who carried a basket tied with a pink ribbon. In this basket was a heap of cards, each one artistically decorated with a number. The guest selected any number he chose, and another young lady brought a heart bearing the same figure tied with a pink ribbon, by means of which she fastened it on his sleeve. As each young lady arrived she was met by a young gentleman who carried a basket ornamented with blue ribbons and filled with cards, from which she made a selection. While there were seventeen ladies and seventeen gentlemen, there were but sixteen numbers, for a reason which will soon be in evidence. When the young lady had selected her number, she was met by a young man who brought a heart to her and fastened it on her sleeve. The young lady and gentleman whose hearts matched were partners for the evening. Sir took My Lady out to supper, danced with her in the big hall, fanned her, talked nonsense, and made himself generally useful and agreeable.

The first young man drew No. 12, and had pinned on his arm in consequence a beautiful round, red satin pincushion, heart-shaped, signifying that he was heart-whole. The next took No. 1, and was decorated with a candy heart, showing that he was a sweet-heart. The third arrival selected No. 14, and found himself in possession of a very ragged half-heart. He was heart-broken, you know. The fourth took No. 4, and received an immense cardboard heart. Big-hearted, you see. The fifth arrival chose No. 2, and received a marble heart (cardboard skilfully painted). The sixth took No. 15, and received a playing-card with the King of Hearts on it. The inference is plain enough. The seventh chose No. 5, and was given a heart cut out of a sponge. He was soft-hearted. The eighth guest preferred No. 6, and was decorated with a golden heart. The ninth found No. 9 to be a heart of stone. (It might easily be carved from a peach-stone.) The tenth arrival selected No. 10, and was given a delicious-looking cake—heart-shaped. He was good-hearted. The eleventh on the list tried No. 7, and was pleased to receive a silver heart. The twelfth took No. 11, and was given a string of hearts. He was a heart-breaker. The thirteenth guest unluckily chose No. 3, and received an odd-looking canvas bag. Something was inside, and out of curiosity he opened it, finding a little yellow chicken. He was chicken-hearted. No. 8 proved to be a beautiful white linen doily, heart-shaped, and the fourteenth guest was considered pure-hearted. The fifteenth guest found No. 16, and was given a wooden heart, while the sixteenth was fortunate enough in selecting No. 16, and receiving a heart-shaped card with a huge lion's head pasted on it. The last guest who came saw all these decorations, and inquired for his. He was told that he was heartless, and that he must find another as heartless as he.

Much fun followed the disposal of these hearts, and much more the mating. Then came the program: First, there were some pretty tableaux and charades, and then supper. There were calves' hearts prepared as veal-loaf and served in heart-shaped slices, with bread; salad served in heart-shaped molds and garnished with tiny sprigs of parsley; heart-shaped tarts filled with cherries under whipped cream; marble-cake baked in tiny heart-shaped pans and rich with frosting; ice-cream blocks.

After supper the big kitchen was cleared, the musicians held forth, and dancing was in order. Mr. Poffenberger led out with the young lady who was the least likely to have many partners, followed immediately by the most gallant and popular young man leading Mrs. Poffenberger.

It was a merry evening, and the sleigh-bells didn't jingle on the homeward paths until long past midnight. Everybody said that the Poffenbergers knew how to do the right thing in just the right way.

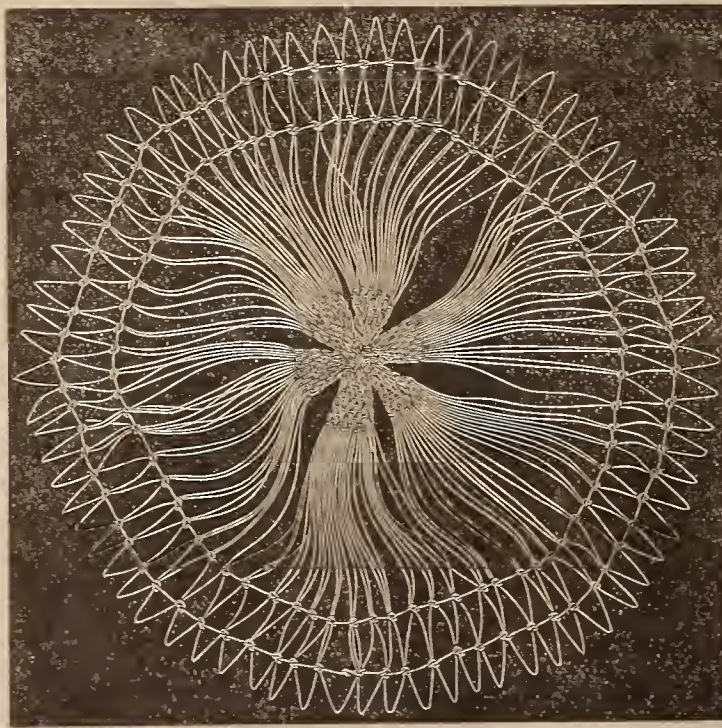
MARGARET M. MOORE.

2

BRAZILIAN POINT DOILY

We here illustrate a doily in Brazilian point, the lace which is very new, very pretty and adapted to very many uses. In fine silk or linen thread it makes handsome borders for handkerchiefs, and is much used for this purpose, while coarser threads make lovely lace doilies.

To make Brazilian point, select cardboard of suitable size, and draw upon it a circle the size you wish your work to be when finished. Around this circle and about one fourth inch from its circumference make another circle. Now perforate both circles with a pin, making the perforations in the smaller circle exactly opposite those in the larger circle and about three sixteenths of an inch apart. The more perforations, the more points or scallops on the wheel. Now take a medium-sized needle and thread and sew through these perforations as shown at Fig. 1. The lines thus formed by the thread would, if extended, form radii of both circles. This forms the foundation on



which to make your point. Now perforate the exact center of the circle, and with a very long thread begin by passing the needle through the center from the back. Now pass the needle under one of the loops (A), carry the thread straight across under the opposite loop (B), now back again to C, pointing the needle toward A. Remember always when taking up the loops to point the needle toward the threads. This keeps the threads from crossing except at the center. When all the loops or stitches have been taken up, carry the thread to the center, and with buttonhole-stitches fasten all threads firmly together. Now the piece is ready for any design you may wish to carry out. Any pattern used in drawn-work is suitable for Brazilian point, the threads taking the place of the undrawn threads in drawn-work. When you have finished your design, clip the foundation-stitches and remove the work. The same cardboard may be used repeatedly by renewing the foundation-stitches.

GRACE McCOWEN.

OUR ECONOMY CLUB

For two years or more we had read and talked of the economy clubs of various sections of the country, and we of our locality had concluded that what others had successfully and profitably carried to an issue we might also be able to carry out. The result is a club of this kind in most pleasant and effective running order, and with a membership of twenty-two.

This list of twenty-two names of housewives does not by any manner of means include all who would be a direct credit and help to our order. And eventually we hope to number others among the wide-awake, intelligent and bright-faced women who are at present much interested and avowedly much benefited at every session.

We meet from home to home, as is usually the case wherever such clubs have become an established factor in a community, and, nothing preventing, we meet twice a month. Refreshments are not expected; in fact, "no refreshments" is the rule. But an occasional member who can just as well as not takes it upon herself to "surprise" her club guests of the afternoon, and a light, easily prepared "something" is brought out, and really much enjoyed. Ice-cream and cake are occasionally served in the summer. Sometimes it is tea and wafers, or tea and little sandwiches. But more often the "something to eat," if anything at all is given out, is a basket or tray of apples, a basket of grapes in season, bananas, or something of this kind. It is not the object of these gatherings of busy, hard-working women to "entertain," after the usual manner of entertaining one's friends. We meet to visit, to learn new methods and ways, to suggest and help, to brighten our own wits and our lives, and to spend a pleasant few hours together. When some of the wee babes of the community have grown a few months older we shall boast a membership of thirty or more. A few mothers are as yet necessarily detained at home.

We have a membership fee in our club. This is not usual in clubs, I believe. But we pay into the hands of our treasurer ten cents a month, or one dollar and twenty cents a year each. Feeling so disposed, we donate other dimes, yards of goods, or whatever we choose during the year, and at the end of a year our money is expended in warm flannels and other goods, and we meet to fashion them into garments for some needy family or families of little ones, whom, in the meantime, we have been looking up and ascertaining facts concerning. Thus are we helping others while we are helping ourselves in such a number of ways.

We number among our members several who are helping themselves to the very necessary "all-needful" by pursuing some special branch of industry. We have a few members from our nearest town, mostly wage-earners, and they give us the benefit of their experiences in self-helps and economies. There are no drones in our hive, and every member brings a bright face and hopeful, encouraging words.

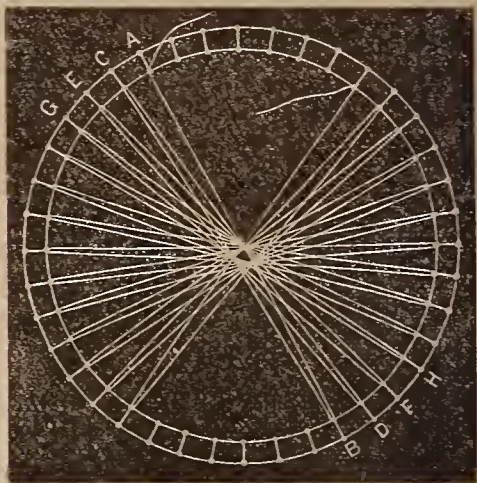
The object of these economy papers, then, is to give to the readers of this paper the many really helpful bits of wisdom

and economy and thrift gleaned from those who relate them from their own life and their every-day experiences.

Our club met the other day at the cozy farm home of Mrs. Della Peterson. We were all wondering at the non-appearance of Mrs. Blanche Mayne, for she was never absent, and we all admire her so much, when she rushed in the breezy style so characteristic of her, and all out of breath. She was quite late, and she did so dislike to be late. For to miss a single minute of the "economy hours" she always declares "a real calamity." She had driven down the lane unseen, and had tied her pretty roan pony to a tree under the shade.

"Still talking economy, I see," she said. "And by your leave, ladies (in fact, without it, for I have the floor), I'm going to disclose to you one of the best methods of economy that a farm-wife ever practised. I can prove it, too. The minute I say 'biddies' there isn't a doubt but that you will want to push me over into the poultry corner of the

farm and leave me there. I'm perfectly content there. But I'm in attendance at the economy club quarters to-day, and I want you to know that but for our (my) biddies I don't know what we should do for 'extras' and luxuries sometimes. I used to consider it economy to make my own supply of soap for laundry purposes. But I don't do it any more. I just give it all to those biddies, and they convert it into more soap and better soap than I can make. Twice or three times a week, too—depends upon the season—I boil up the accumulation of potato-parings, refuse leaves of cabbage and other garden vegetables, and I put a seasonable amount of grease and meat scraps into the mixture while it is cooking. When well done and cool I mix it all stiff with bran or ground grains, and all the milk I have to spare goes



into the kettle also. This goes to my flock of thoroughbred beauties. And don't they lay, though! In the winter they bring me dollars and dollars. I'm going to keep forty hens next winter, and I'm going to start a bank account from the income they will bring me. Practise all the economies you please, ladies, but you can't think of one that will quite counterbalance mine, I believe."

"I have no use for 'biddies,'" said Mrs. Nellie Foster. "Living where I do, in the village, I could not keep them, anyway. But I have more time at my disposal than of anything else, as you all know," with a very suggestive shrug of her shoulders. "My work is very light, and I can't read away all of my superfluous time. Besides, the dollars come handy at our place as well as elsewhere, and I love to earn some of them. I make and sell lace. I know it isn't one of the necessities of life, but women will have it, and I know any number of them that can't make it. Neither have they the time or inclination. This fact brings me my opportunity, for I'd rather make lace than to do any other thing that I know of that comes under the heading of work. There are no printed patterns that are so intricate that I cannot pick them out and master them readily. Practice makes perfect, you know. And they say my fingers make the crochet-needle fly as the shuttle in the loom. I know that lace grows rapidly when I do take it up. I buy my thread by the quantity, and save dimes in that way. I crochet lace of linen, cotton and silk, of widths to suit all purposes, and some of it commands one dollar a yard. Almost every one prefers it to 'store lace,' and I can sell every yard that I can make, at a good profit. I am invariably sold out of it, and it has come to be a matter of more orders than I can supply. So my economy would come under the double heading of economy and wage-earning, wouldn't it?"

Several other housewives had divulged their little economy secrets before Mrs. Mayne had arrived that day, and it was getting late by the time Mrs. Foster had been given a hearing. Mrs. Peterson excused herself for a few moments while the ladies were discussing a bit of news of the day and current events, preparatory to driving home, and when she returned it was with a trayful of little cups of chocolate and tiny wafers that she had purchased over town. Mrs. Peterson is quite "well-to-do," and can afford pretty cups and saucers and many other lovely things for her home. Those who cannot so well afford it do not mind, but return home full of happy, pleasant thoughts that prove a help and an "inspiration" for many days and months after.

HELEN HARRINGTON.

2

SCRAPPLE

Boil a large beef shank in plenty of water until tender; take out, and chop in a chopping-bowl, then return to the liquid in the kettle, and season well with salt, pepper and sage. When it boils up stir in whole-wheat or Graham flour until as thick as mush, then press into a pan. It is good either cold or cut into slices and fried.

FROM MY HEART

BY MARY ANN DIETCH-WRAGG

There's no place like home, the poet says,
But I've found the saying trite
Unless we've got a good hired girl,
Be she either black or white.
I like to smell the cooking,
And hear the kettle hum;
But it's cold and dark and lonesome
When our good hired girl is gone.

Your may brag of mother's cooking,
And your sister's pumpkin pies,
But between us, friends, I assure you
It's a pack o' blasted lies;
For home is the dreariest place on earth,
And doesn't seem like home,
When the fire is out in the kitchen stove
And our good hired girl is gone.

2

HOME-MADE VALENTINES—A VALENTINE LUNCHEON

WHEATLEY says Valentine was a man of most admirable parts, and so famous for his love and charity that the custom of choosing valentines upon his festival is still practised. The little valentine has often played an important part in the lives of the great, the humble, the king and the peasant. It is a symbol of the love and romance that make a paradise in this world.

A little mystery is always enjoyable. The fourteenth of February is a day sacred to St. Valentine. It was a very odd notion, alluded to by Shakspeare, that on this day birds begin to mate; hence perhaps arose the custom of sending on this day letters containing professions of love and affection.

It is true that every loyal lord taxes his wit, his simple rhymes in studious truth to pay.

"Oft have I heard both youths and virgins say,
Birds choose their mates and couple to this day."

As a "little nonsense now and then is released by the very wisest men" it is perhaps well for us to enter into the spirit of this good patron saint, and make the young people happy.

It is wonderful how much ingenuity some children possess, and if supplied with a few good water-color paints and a few brushes, and guided by some older head, what lovely valentines they can produce! They can make exquisite cards by tracing beautiful designs—say bunches of forget-me-nots or daffodils. To obtain the best results they should use tracing-paper and a soft pencil, by means of which the flowers can be perfectly copied. They are then colored. This is what so fascinates the young people, for they love to watch the flowers grow in luxury and beauty.

Such exquisite book-markers can be made in this way. One I saw was a bunch of daffodils, another a spray of narcissus. The little girl of twelve years had first drawn it off, then traced it on a piece of dainty white card-board the length of an ordinary book, and then colored it. The work was certainly worthy of so small a woman. This, with a pretty selection from a book, was sent as a valentine to a little boy friend.

Another dainty and useful valentine is a painted powder-sachet. Accompany it with a hand-painted card, on one side of which is an appropriate thought.

"Tomorrow is St. Valentine's day,
All in the morning betime,
And I a maid at your window
To be your Valentine."

As mystery is one of the pleasant features of Valentine's day, you can mystify some friend by sending this—printed—along with a dainty hand-painted card, a forget-me-not bunch of flowers. And paint a little flower in the outside corner of the envelope you address to them. They will think someone surely loves them, or is pleased with them, to send them such a present—and the very thought of it will make a child happy for weeks.

We should never forget that we were once young and loved to receive and send valentines, and should try always to keep in sympathy with anything that helps to brighten and sweeten life for the little folks. The children who are furnished plenty of pin-money, and can go to the book-stores and furnish themselves with every available kind, lose half the pleasures in sending valentines. It is the planning and working together to surprise friends, and the anticipation of it, which fill one with delight and expectation.

It is often remarked that when one has an elaborate outfit one has no inspiration; and when the happy moment of successful effort comes, the simplest material will express wonders. All celebrated artists or painters have anecdotes told of their youthful genius, using the simplest tools. Lead-pencils are the simplest and most satisfactory means of sketching. Among my little amateur friends some of them have

painted for years with their first water-color paints (gotten for them when children), of good fast colors.

It is by experience that every artist must first copy, and then by uniting several persons to labor in the same line of love is "to provoke one another to good works." And I cannot suggest a more favorable time than to begin for Valentine's day. Commence at once to draw and copy, and you can touch up with color in a few hours.

A young girl sixteen years of age is getting up a valentine luncheon, and is going to have ten guests—five girls and five boys. She is painting for each plate a card with an appropriate recitation, which the guest, after reciting, retains as a souvenir. The luncheon is to be served in simple courses. One house-boy with his apron and waiter will serve the ten. The plates are to be filled with chicken salad on a lettuce-leaf, a piece of celery, a beaten bisquit, a rolled ham sandwich, a tomato with mayonnaise dressing, chocolate-ice with angel's-food cake and fruit-cake. There will be nothing warm, and only a luncheon for girls and boys, with no chaperon, except the father and mother, who will not appear at the luncheon, but will keep in the background, letting the young people enjoy themselves. The boys and girls are to leave the house promptly at ten o'clock. It is a staid old college town, and the grave professors and kind president have relaxed their rules to allow this little diversion among the boys and girls. They say their hearts grow younger at the thought of their alma mater, and the old fourteenth of February days come back to them with a breath of spring violets.

SARA H. HENTON.

2

FLAG LACE

ABBREVIATIONS.—Ch, chain; st, stitch; tr, treble.

Make a chain of 45 stitches.

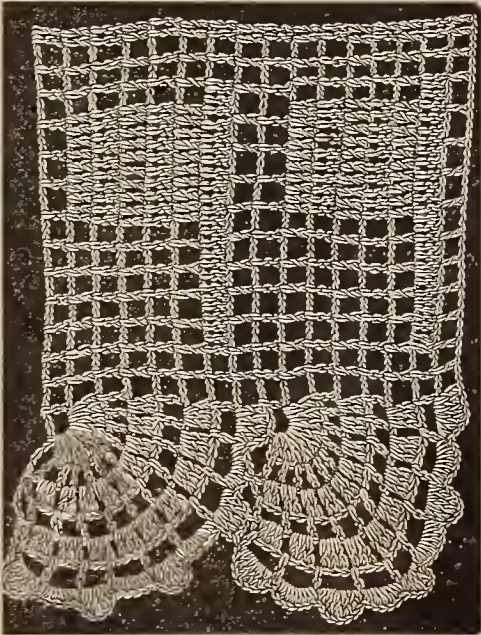
First row—1 tr in fourth st, * ch 2, miss 2 st, tr in next; repeat from * 12 times; ch 5, catch with slip-stitch in end of ch. Turn.

Second row—Ch 2, 10 tr under ch 5, * ch 2, tr on next tr; repeat from * 6 times; 9 tr on next 9 st, * ch 2, tr on next tr; repeat from * twice; 1 tr in end. Turn.

Third row—Ch 3, tr on tr, then three open spaces, 1 tr on each of the next 9 st, 7 open spaces, ch 1, tr in next tr around scallop, making 9 open spaces. Turn.

Fourth row—Ch 2, 2 tr under ch 1 around scallop, and finish like second row. Turn.

Fifth row—Like third row to scallop; 2 ch and 1 tr between each group of 2 tr in preceding row and in end of row. Turn.



Sixth row—Ch 2, 3 tr under each ch 2 around scallop, and finish like second row. Turn.

Seventh row—Ch 3, tr on next tr, 2 open spaces, tr on each of the next 27 st, 2 open spaces, ch 3 and tr between groups of 3 tr around scallop. Turn.

Eight row—1 double 5 tr, 1 double in first ch 3, 7 doubles in next; repeat alternately, finish with a row of spaces as first row. Make 13 open spaces in first row of next scallop, putting last tr in first st of small scallop; ch 5, fasten in third st of same scallop; join end of third row to center of next small scallop, end of fifth row to following one, end of seventh row to same.

This is a new design, very nice for pillow-cases, aprons or any purpose requiring a durable, easily laundered lace.

MRS. J. R. MACKINTOSH.

2

THE KITCHEN CLUB—COFFEE GOSSIP

"Sizz-z," went the coffee, splashing out in a brown, fragrant cataract onto the hot stove. Dorinda had watched it faithfully for three minutes after pouring on the boiling water, and had then run to the door to let in Miss

Tildy Pettibone, and in that instant it had arisen in its aromatic wrath and boiled over.

"Does it about three hundred and sixty times a year," said she, grabbing the pot with her apron and plunging it on the hearth. "I make up my mind over and over my coffee shan't boil over, nor boil at all, but the minute I look in the other direction over it goes."

"You should have a drip coffee-pot," said Miss Tildy.

"I shouldn't," returned Dorinda, not very politely; for besides being roiled by the catastrophe, Miss Tildy's calm, superior tone irritated her.

"The only proper way to make coffee," insisted Miss Tildy, aggravatingly.

"Supposed to be," Dorinda asserted; "but after a lot of fussing and simmering and waiting it don't taste a bit better than good plain coffee—the berries ground fine and measured into a clean pot, a tablespoonful for every cup and one for the pot, hot water poured on and let come to the boiling-point, and then left to stand where it will keep good and hot for a time without boiling."

"What a nice smell!" Mrs. Tinkham rolled her fat little self into the kitchen and sniffed cheerfully about. "And what's the odds if the coffee does boil?"

"Oh, no!" retorted Miss Tildy, scornfully, "what is the odds? Peggy wouldn't care a sixpence if her coffee boiled as hard as it could jump for half an hour or so—on yesterday's grounds at that."

Peggy laughed good-naturedly.

"I don't boil my grounds up very many times," said she, coolly, "but I don't throw 'em out every time I make coffee, and dump out the good coffee that's left, like Dorinda does."

"That's just the trouble, Peggy," said Dorinda. "I'll stand up for your biscuits every day in the year, but if this is to be a club for mutual criticism truth compels me to say that your coffee would be better flavored if you would throw out the grounds every time, and the cold coffee that's left, for it spoils the delicate flavor; and besides, I don't believe its healthy."

"Well, I think that's mostly notion," returned Peggy, easily, "about its hurting the flavor. I don't go so dreadfully much on flavor, anyway, if the coffee's good and strong. I throw out the grounds when I want to make an extra good cup, but ordinarily I don't bother about them, but let them alone until the coffee-pot begins to get heavy. The coffee I always save and boil it up along with the other; and if I boil it a good bit it gets strong and clear, and my Jim says it's slap-up, drinking three cups, provided he doesn't know it boiled, for he can harangue like the rest about not letting it boil."

Miss Tildy was too much overcome with horror at Peggy's wild heresies to say anything for a time, and while she was getting herself together for an attack Dorinda headed her off with peace-making intent.

"I'll tell you a lovely coffee recipe that'll make you squeal with delight. It is especially nice for an invalid, but is good for anybody. Take a nice fresh egg and beat it in a beater—a cylinder kind of a beater is best—until it is all stiff froth, dip it into a large cup (one egg will do for two cups; if you like), put in the right amount of sugar; do not have the coffee hot enough to cook the egg into bits, but just moderately so, and pour it in a small stream into the middle of the egg until it all froths up to the top of the cup into a great heap of foam. I tell you it's good."

"I should think so," said Miss Tildy. "I'll try it some time. Speaking of extra kinks, I like a bit of lemon in my coffee or tea, Russian style."

"That reminds me," said Peggy Tinkham, popping up, "that I must be rushin' off home to make coffee for my Jim's supper," and she frisked off. Miss Tildy, discouraged by Peggy's evil pun, likewise vanished, and Dorinda hustled up things and summoned George, the small fry and faithful chronicler of the minutes of the club, to supper.

PRISCILLA PIPER.

2

A HOUSEKEEPING INVOICE

Stores do it, so why should not the housekeeper? It would save many dollars in the household if at stated times the housekeeper would systematically go over the entire contents of the house, as storekeepers do their stock. Many things are put away and forgotten and get past the time when they can be used.

A friend whose way I cannot help but admire, even though I have not been able to copy, follows this rule: "Every thing that can be put to any kind of use is worked up; that which cannot is burned." In this way she keeps her house free of the materials in which moth and rust revel.

The early winter months are sometimes

overflowing, but during the later ones there is scarcely anything in which one cares to interest themselves. As a comfortable old lady once said to me, "We are just sitting with our feet on the fender waiting for spring to come." However, there is so much one could do. Last year a bright little girl hunted up all the old white cotton rags about the house, and soon had enough sewed together to make a rag carpet for her room, which was woven with green chain. Another one is thought of for this year. Still another spent these days making beautiful lace for her summer dresses, and still another made her white dresses for the next summer.

The housekeeper, though, should go over all the household linens. Those that are thin should be laid aside for warmer weather. If new must be had, it is better to use it now, in the weather that is so hard on everything; besides, it is a better time to take the new off of sheets, towels and table-linen.

I have found the use of small top table-cloths quite a benefit. Where frequent changes must be made, I find it easier to launder two small ones than one large one. They should just cover the top of the table, and can be used over a large table-cloth that has become too thin to use alone.

The muslin underwear can also be added to at this time. You will rejoice to have it out of hand before warm weather. Cut up some of the old and faded dress-skirts for aprons, and use the rest in carpet-rags.

In one of my early housekeeping years I thought we must eat up every bit of fruit, jelly, etc., canned the past year. Don't do it. Save some of it. Some fruits are abundant only once in two years, such as cherries. Use only the ones that you are sure you can replace. It is a good plan to use those first that come first in the season.

If you have discarded books and toys belonging to your children, give them to those not fortunate enough to have them; but unless repaired burn all broken toys.

Thoroughly get rid of all useless stuff, and when you come to clean house you will be surprised to find how much easier it is. Make your invoice a thorough one, and you will be glad every year to have less accumulation and less to be handled.

BELLE KING.

2

AMONG MY FLOWERS

Those who love flowers must remember that our pets will not grow in old soils, however well we may enrich it. The very best thing that we can do with these is to chop up the old turf and give them entirely new mixture. With the turf comminute the oldest stable manure thoroughly decomposed. Plants that demand this change of soil are verbenas and some of the roses. On the other hand Tropaeolums do better in the same soil year after year. Among our potted plants the Hoya, or wax-plant, absolutely rebels against a change of dirt. When it has been shifted often enough to have reached the seven-inch pot, let it alone for four or five years; only supply it with abundance of water during growth. The failure with pansies is frequently that they are planted in old soil where they have been grown previous years.

I wonder if there are others who are troubled like a correspondent of mine with the rotting of lily-bulbs. While hyacinths demand the richest possible soil, lilies refuse to endure the contact of manure—even old, decomposed manure must be used with great care. But I should like to have you see my long rows of Madonna lilies in July and my Japan lilies in August. I have them by the hundred. This summer I picked clusters of Auratum lilies with from ten to twenty buds and blossoms. The old-fashioned tiger-lily can be made far more beautiful than it generally is by carefully replanting the bulbs in good garden loam about every second year.

I have a superb lot of cosmos, and they ought to be giving me an abundance of blooms. Unfortunately, I did not start them quite early enough, and as a result they will mostly be failures as annuals. It is hardly worth the while to plant the seed of cosmos unless it be as early as February. The plants may then be transplanted when two feet high in May. But even then I find many of the strongest plants failing to come into bloom before the heavy frosts.

Have any of my readers ever tried to make use of the Japan quince? The flowers, of course, are among our finest ornaments in early May, but you will find that the fruit makes a jelly superior to almost any other. The fruit is often borne in large quantities on old bushes, and should be picked like other quinces when turning yellow.

LUCY POWELL.

(Continued on page 12)

THE GUEST-CHAMBER

ONE reason that the guest-chamber is so often cheerless and uncomfortable, especially in houses not heated by furnace or steam heat, is because it is kept closed except when opened to receive a guest. This is a mistake. If the door is always kept open, the temperature will be about the same as that of halls and adjoining rooms; then when a guest is expected the heat can be turned into the room, a fire started in the stove or grate, or if nothing else, a small oil-heater can be used. A room may have as many dainty appointments as possible, but if it is chilly and damp it is not a fit place in which to put a guest. A great many housekeepers are careless about the bed in the guest-chamber. The bedding may be of the finest—linen sheets, soft blankets, downy comforts and dainty lace-trimmed pillows—but if the room has been unoccupied, and the bed made up and not aired for weeks, the chances are that it is damp and unsafe to sleep in. There is always some dampness in an un-aired, unoccupied room, especially in winter, and the best way is to keep only a counterpane and pillow-shams on the spare bed when not in use. Before the room is to be occupied, after it has been aired and warmed in some way, make the bed with fresh sheets and blankets, taking care to air these before the fire an hour or two before putting them on the bed. All muslin gathers dampness when laid away in bureau or linen-closets, and ought never to be used without airing. It is a good plan to spread a flannel blanket over the mattress before putting on the sheets, and extra blankets should always be placed at hand, as some people require more covering than others.

Little, thoughtful attentions from the hostess for the comfort of her guests express more hospitality than giving them a room with beautiful and costly furniture. I shall never forget a visit I once made to a dear old lady. It was midwinter, and in a country house. When she took me to my room for the night a fire was burning in a little stove, the bed-clothes were turned back, "so the bed would warm," she said, and by the fire hung an extra blanket, which she wrapped around me when I was ready for bed, and then tucked the bed-clothes carefully in at the sides before she said "good-night." I was so comfortable that before I hardly had time to think I was fast asleep, so different from shivering for an hour or more in a cold bed, as has sometimes been my experience.

A great deal has been written, at one time and another, about providing the guest-room with little comforts such as pins, needles, thread, buttons, writing-materials, a brush and comb for use in case the guest has forgotten her own, an entertaining book, a late magazine and any other little things which would add to one's comfort. This is all right, and too much care cannot be given to these little details. I would also have my guest-chamber just as prettily and luxuriously furnished as possible, but above all things let us be careful to have it comfortable and see to it that cold nor dampness is present to not only give discomfort, but menace the health or perhaps the life of our guest.

MAIDA McL.

HELPING ON THE WORK OF THE TEACHER

The majority of children from farm homes start for school at eight o'clock, carrying a midday lunch, and return at five. Not a few mothers are conscious of a feeling of relief that for nine hours the house will be quiet and the responsibility of the care of the children lifted from their shoulders.

In one sense this is a natural feeling. If you have carefully prepared your children for school you have done your duty. When I was a teacher of a country school I used to long for confidential talks with the mothers of my pupils. Now that I have an opportunity to talk with the mothers of other teachers' pupils I am going to give them a glimpse of the teachers' side of the question.

First, clothes. It may surprise you to learn that teachers are often annoyed by a mother's lack of thoughtfulness regarding this matter. Be sure that your children are comfortably and neatly clothed. Anything regarding cleanliness is unnecessary here, for a woman who would be guilty of sending a child to school offensively dirty would not be a reader of a journal like this. But there are many points overlooked. Children should be taught to remove overshoes and leggins upon entering the school-house, and to put on the same on going out to play. They should be instructed to hang up all wraps as soon as they are removed. Above all else, mothers, no matter what you do or leave undone, provide your girls and boys

with plenty of clean handkerchiefs, and teach them to properly use the same. You may think I speak too plainly. Just imagine yourself surrounded by twosome children of varying ages and varying habits of personal cleanliness, especially in the season of the year when colds are prevalent.

Again, food. To go beyond what may seem to be the province of a teacher, be sure that your sons and daughters have a nourishing breakfast. Remember how rapidly they are growing; also remember that it is impossible for an ill-nourished child to make satisfactory mental progress. Don't fall into the too common error of filling the dinner-pail with cake and pie. My own lunch was once put up by a kind-hearted but unthinking woman, who gave me five kinds of cake. Let bread be a staple article of diet. Vary the bread, however. Use Graham, whole-wheat flour and corn-meal, and sometimes substitute biscuits or gems. Sandwiches, if well made, are always acceptable. Any kind of cold sliced or chopped meat, fruit-jam, the yolk of a hard-boiled egg, crisp bits of celery, finely chopped nuts or seeded raisins can be used. Add to the contents of the pail a covered jelly-cup filled with stewed or canned fruit, also baked apples, boiled eggs, pickles (in moderate quantities), eggs, and any kind of fresh fruit obtainable. Give them cold rice or tapioca pudding. Do not entirely exclude cake, but let it be a relish rather than the base of the meal. Deal sparingly with pie. A "mussy" piece of pie has spoiled more than one lunch for me. Occasionally add a little surprise which will delight the child—an orange, a handful of peanuts, a tiny sack of pop-corn or a bit of good candy. Be sure pail, basket, box, or whatever receptacle used, is spotlessly clean, and don't forget to supply a napkin. Not necessarily a fine one; one made from the much-used plaited crash or one taken from the best part of a worn tablecloth will do. Teach your children to eat their lunch at the midday intermission. Any teacher will tell you how widely prevalent is the habit of "piecing at recess." One thing more, do not fail to impress on your child's mind the necessity of sitting down and partaking of his or her dinner in a proper manner. Do not leave it for the teacher to break up the habits of running around the room while eating, and of cramming.

There are even weightier matters regarding which a teacher and a mother should work together. Children learn much that is impure at school. No matter how watchful a teacher may be, she cannot but know that many things occur which are kept from her. There are children who delight in the use of vulgar and obscene language. Mothers, teach your boys and girls to look at these things in the right light, and help to do away with the false idea that to report these offenses is tale-bearing. Go further than this. Gain your children's confidence, so they will come to you with such matters. A teacher may be wise and may truly love her pupils, but no one can take a mother's place.

HOPE DARING.

THE CARE OF THE TEETH

We can never know what a blessing it is to have good, sound teeth until they are missing; but, like other friends, our teeth must have some care and attention if we wish them to stay with us. The teeth should be brushed every night and morning, and if possible after each meal. It is well to use floss silk or a quill toothpick for the purpose of removing the particles of food which collect between them.

Children should be early disciplined in the care of teeth. The large double ones, which appear at the age of six years, are very liable to decay, and are never replaced after extraction. Cracked wheat, brown bread and corn-bread, which contain a large portion of lime, should in a large measure constitute the food of children.

Medicines containing acids which may injure the teeth should be taken through a tube, and care should be taken to brush the teeth after taking acids or sweets of any kind.

As the gums shrink away the teeth are liable to loosen and fall out; a wash of listerine is recommended to keep the gums in a healthful condition.

The teeth should not be used in place of scissors or nut-crackers. They really were not intended for such purposes. They should be examined by a skilful dentist at least once a year, and under no consideration should washes, powders or soaps be resorted to without the advice or consent of the person who has professional charge of the teeth; otherwise serious results may follow which it would be difficult to correct.

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A GIRL FARMER

By Annie M. Burke

CHAPTER IV.

UT it was getting on into the hot weather now, and this was time for Joey's health to give out. Every year, in the burning harvest-time, Joey fell sick. Sometimes it was in the middle of the hay-making, sometimes in the shocking of the oats, sometimes in the midst of threshing, but always at some time during harvest Joey had a time of sickness. The doctors told him if he would give up work during this season, if he would keep out of the fields and stay in the shade, he could escape this illness. And he did try a little to stay about the house and yards at this time, and his mother and sisters tried very hard to make him do so, but it was not in Joey to remain long out of the field when the binder was at work and when his grain was going into the shock.

So every year Joey had his season of illness. This year was no exception. It was the very first day of the hay-loading. He was standing on the hind end of the rack pitching forward to one of his men as the loader threw the hay up. It was getting near noon. The hay began to seem very tough and heavy; even the bare fork with no hay on it at all felt heavy, for Joey was getting weak. However, he was grumpy and would not give up.

"The bell'll soon ring for dinner now," he thought, "and then I'll be better after the noon rest. Yes, I'll be better after the noon rest. I'll hold out until the bell rings!"

He did hold out till the bell rang, but his noon rest was a very long one. It lasted till the middle of July. The first few days of this time he tossed in a fever; then the doctor came; there were medicines and prescriptions, and in a little while Joey was on his feet again. It was before he was quite well that his mother packed a valise and made him go to town for a visit.

"There's no use talking!" she said. "If Joey stays home he'll be sure to get into work somehow or other, so he's got to go away for a visit, and stay a week at least!"

And this is how it happened that Joey Madison came to be idling about town in the midst of the busy harvest-time while his three hired men cut the grain and shocked it up to suit themselves. The town was the county-seat, only five miles distant from the Madison farm, and in it there were a good many of the very best houses where Joey Madison was more than welcome. Several of his college friends lived here; then there were town girls who liked Joey's manners and who knew the value of his broad acres as well as did the country girls. There was no lack of places for him to go when bound on a visit. It was on Monday morning that his mother sent him off, and on the following Saturday afternoon he was to return.

It was on the forenoon of this Saturday that Mollie Gordon drove to town with her week's gathering of eggs. Mollie exchanged eggs for all her groceries. The sums realized from the sale of grain and live stock off the fifty acres never went into kitchen supplies. Every Saturday there was a box of eggs to take to the grocery-store. On this particular Saturday she was in something of a hurry, and drove into town in her big farm-wagon. Early in the morning she had taken half a load of tile out to the meadow, and had laid them along a place where she had hired a man to put a ditch. When she drove back to the barn-yard again it was just ten o'clock.

"There, I'll just have time to take those eggs to town and get back before dinner," she thought. "I'll not have time to unhitch the grays and put them to the buggy. I'll just take the lumber-wagon, and go on as I am."

And she did. It was an unusual thing to do. Young ladies in this neighborhood did not go to town wearing a sunbonnet and riding in a farm-wagon. They were fashionable, up-to-date girls, and had buggies and phaetons and bicycles for going to the county-seat, and in the street you could not distinguish them from the town girls. Mollie knew this, and usually respected it by attiring herself very carefully for going to town, but to-day there was not time.

"I'll not be in the fashionable part of town anyway," she thought. "I'll just go to Johnson's grocery and then come home again."

And she put in the box of eggs and started out. It was not an ill-looking turnout. The wagon, if it was a farm-wagon, was a good one, the grays were young and strong and hard to hold; Mollie herself was a splendid young woman—splendid in health and beauty and strength. No gingham dress or sunbonnet could conceal this fact. The breeze of the corn-field at sunrise, at noontime, the air of the farm-yard, the orchard, had given her cheeks their freshness, her eyes their clearness, while steady exercise since childhood had given her strength and development. There was not many like Mollie. This morning, too, she was in

unusually good spirits, and enjoyed the efforts of the grays to get away from her.

The road was gotten over very quickly, and she found herself approaching the town. Just before reaching it, however, she met a buggy with three young ladies in it coming toward her. She gave no heed to it till it was quite close, then she saw that the girl who was driving was her cousin, Ethel Graham. The other two were probably a couple of town girls whom Ethel was taking out to spend Sunday with her. When they got near enough Mollie turned her face to speak as usual. But Ethel was gazing straight ahead of her. She would not turn or look or speak. Thus they passed each other.

"It's because I'm in this farm-wagon!" thought Mollie, instantly. "And because I've got on my gingham dress and sunbonnet! Yes, that's why it is! She won't look or speak! She needn't think she can treat me so! She wouldn't know me before those town girls! But I won't stand it! I won't take such treatment from her! She'll see! I'll pay her back. Yes, I'll pay her back somehow!"

The brightness and freshness had gone out of the morning for Mollie. She was not full of joy and good spirits now. Instead she was all anger and revenge and bitterness. Such is the effect of a foolish snub.

A little further on she turned into the outskirts of the town. Far on up the street she could see that there were a good many people and vehicles moving about, and concluded that there must be something going on in town to-day. The part of the street where she was, though, was quite deserted; there was no one to be seen on either side. But pretty soon two fashionable young ladies and an elegantly dressed young man turned suddenly into the street, and came walking briskly toward

away?" he asked. "Yes? Is there any chance, then, for a fellow's getting to ride out with you? I was to go home to-day. Promised my folks I would, and I was to find a chance to ride the best I could. If I could just get in with you now when you're going home—"

But here the young ladies interrupted him. "Why, Joey! Why, Joey Madison!" they said. "You were to stay till the afternoon! You know you were! You're not going home now!"

Joey immediately introduced the girls, calling Mollie his "friend, Miss Gordon." The two young ladies bowed very stiffly to the girl in the sunbonnet, and the girl in the sunbonnet took care that her bow was just as stiff as theirs was.

"But you see I have a chance of riding home now," Joey explained. "In the afternoon I may not be able to find any one going my direction."

"Nonsense! Everybody from the country is in on Saturday afternoon! You know they are!" they told him.

"But there may be no one I know," persisted Joey. "I shouldn't want to take that long ride with some one I never saw before, and couldn't talk a word to."

Here Mollie put in a word. "My accommodations are not very good," she said. "In the afternoon there may be huggies in from our direction. I just came in the big lumber-wagon to-day."

"Yes, it might hurt me to ride in a farm-wagon," said Joey, ironically. "I never was in one before, you know!" Then changing his tone he said, pleasantly, "If you'll just say I may, Mollie, I'll be up at Johnson's grocery there in half an hour, when you are ready to go, and ride out with you."

It must have been plain to the two young ladies by this time that the meaning of all Joey's anxiety to get home was merely a wish to secure the company for the homeward drive of this girl in the gingham dress and sunbonnet. But still they persisted in urging him to remain till the afternoon, and finally one of them offered to drive him out home herself if he would stay. Joey wriggled out of accepting this invitation the best he could, and again told Mollie he would be at Johnson's grocery in half an hour. To this she agreed, then drove on, leaving him to make his peace with his two friends in his own skilful way!

Mollie was warmed to the very heart. "Joey is just as nice as he can be!" she said over and over

Joey agreed that it was, but in his heart he thought, "It is you who are just glorious, Mollie!"

When they reached Mollie's gate it was noon, and she asked him to come in and stay for dinner. Joey was delighted and surprised. "I didn't think it was in you to be so hospitable!" he said. For answer she bade him put away the horses while she went in to see if Aunt Kate had dinner ready.

But Aunt Kate did not have dinner ready, though it was high noon. The table in the dining-room was bare, out in the kitchen the fire was out, and everything in the neat order in which Mollie had left it in the morning. She looked about the house a little. In the sunny bay-window her grandfather lay asleep in his arm-chair; in a rocker nearby her grandmother sat knitting; out in the back yard the two little girls were playing hide-and-seek among the currant-bushes. Lastly she found Aunt Kate. She was sitting in a shady corner of the front porch, and Mr. Hudson, the merry old gentleman with the white hair and ruddy cheeks, was there talking to her. It was not the first time he had been to call on Aunt Kate since that night they had met at the Grahams' social.

Mollie stayed at them in disapproval. "How much they're taken up!" she thought. "Aunt Kate has clear forgotten the dinner, and it is past noon. I never did such a thing in my life!"

They had not noticed Mollie standing in the doorway, and she withdrew without disturbing them. She hastily built a fire in the cook-stove, and was busily engaged in getting dinner when Joey came in, entering by the same door that she had. Mollie told him to go into the parlor and sit down and read or look at photographs. But Joey knew a thing or two about visiting in a house where there was a girl. He did not want to look at photographs in the front room. Instead he turned an empty churn upside down at the kitchen sink, perched himself upon it, and stayed there watching Mollie roll out biscuits. He had never seen her engaged in housework before, and was much interested. He gave her some droll pointers about handling her rolling-pin, and advised her as to the most scientific way of using the biscuit-cutter. He told her she was awkward from working outdoors so much, that a girl who worked in the field never could be a number-one housekeeper. Mollie flushed and got angry at this, but when she looked up she saw Joey was laughing and had only been trying to tease her. She went on with her biscuits rather embarrassed and ill at ease after this. Joey was enjoying himself greatly, but in her heart Mollie was resolving that never again should any young fellow—not even Joey Madison—be allowed to sit by her kitchen sink and amuse himself with making comments while she tried to measure and mix and roll out.

At dinner-time Mollie sat at one end of the table, with Esther and little Maggie beside her, the grandmother poured the coffee, the grandfather sat opposite, while at the other end were old Mr. Hudson and Aunt Kate and Joey. Aunt Kate and Mr. Hudson did most of the talking. Aunt Kate's name for forty years had been Mrs. Allison, but Mr. Hudson called her "Katie Gordon," as he had done long ago, and sometimes in telling a funny story of their youth he referred to her as "little Katie Gordon." Joey the moment he saw them together regarded them with suspicion and amusement. In some ways he was twice as astute as Mollie.

"Mollie can't see anything!" he thought. "She thinks that old spoony comes over here to visit so much because he knew Aunt Kate when they were young, and because they like to talk over old times. Bet a dollar they talk over the future a lot more than they do of the past."

However, Joey had no mind to disturb Mollie's tranquillity by telling her of his suspicions. Soon after dinner he took his leave, remembering with compunction how eager his mother and sisters must be to see him after his week of absence. Mr. Hudson, however, did not leave at this time. He showed no sign of going. "For genuine boldness and cheek it takes an old widower every time!" thought Joey, as he went down the step.

Joey told his family when he reached home that day that he was perfectly well and strong again, and he tried to make himself believe that this was true. On Monday morning, however, he acknowledged to himself that he did not "feel quite right," but he said nothing about it, knowing they would try to prevent his going to the field if they knew—and Joey wanted to go to the field. He did go to it, and took what he thought to be the easiest place. This was riding the binder. But by ten o'clock the burning sun was making him horribly sick. He began to believe it would be easier shocking, and the next round he got one of the men to take his place on the binder, and he began carrying and setting up the heavy sheaves. But, alas! Poor Joey! This work was entirely beyond him. At eleven he sank down on the shady side of a big shock, and told the men to go on. At half past the bell rang for dinner, and the men went over to the shock where they had left him. He was lying there with his eyes closed, and they had to almost carry him to the house.

Then there was another long noon rest for Joey. His illness this time was the same as before, only that it was longer and he could not sleep nights. His mother and sisters worried and fussed over him, and did everything for him that they could think of. Ethel Graham and the preacher's daughter and several other girls of the neighborhood came



"WHY, MOLLIE, WHEREVER DID YOU COME FROM?"

her. It was an unusual place for fashionable people to appear at this hour of the day, this quiet, deserted end of the street; but probably they had some errand down here. The young man was walking between the two girls; he was only a little bit taller than they were, and Mollie instantly recognized him. It was Joey Madison.

"I suppose he'll cut me, too!" she thought, bitterly. "Yes, I'll bet he won't know me before his town friends, either. He'll go past without speaking, too! Well, if he does I'll never make up with him again! He sha'n't be my friend over the corn-field fence and about the barn-yard and orchard when he steps in off the road and then slight me before his town friends! No, he sha'n't! I won't have it! He has coaxed me into agreeing to a good many things, but he'll never get me to be friends again if he slights me now here! Never!"

And Mollie drove straight on, ready to be badly smudged. She guided her horses quite close to the sidewalk, where he could not help seeing her; then she looked straight at him. "I'll give him every chance to speak!" she thought.

Joey, as he approached her, was talking and laughing busily with the two girls, and for one exciting moment it seemed as if he was not going to look up. Then suddenly he did look up, and saw her. His hand instantly went to his hat.

"Why, Mollie!" he exclaimed, in delight. "Why, Mollie! I had no idea it was you! Wherever did you come from?"

Mollie flushed with pleasure, murmured something in reply, and was about to pass on. But Joey stopped her.

"I say, Mollie, are you going home again right

again. "I've got to own to it! He's just as nice as he can be!"

In thinking thus she was but coming to a conclusion that many another girl had come to. But there was a difference. Other girls thought this of Joey when they had talked with him twenty minutes; whereas it had taken three months of effort on Joey's part to bring Mollie to this way of thinking.

At the appointed time he was at the grocery-store, and Mollie was ready to go. They entered the big wagon together, and started away. Joey was very happy, Mollie was in good spirits again, the grays tossed their manes and sped away—altogether it was a splendid ride. At one place in the road the horses took fright at a man running a stump-puller inside a hedge. They leaped forward and began to run, and Joey grabbed the lines to help Mollie hold them. But she made him let go.

"They won't get away from me," she said. "They have run this way before! They're not bad; they just feel good! I can hold them!"

Joey let go, and watched her and watched the horses. Mollie's bonnet had fallen back. A few locks of bright hair blew about her face, her cheeks took on a deep color, her eyes were brilliant and her lips parted. The lines she held like a man. The horses, which were merely lounging for a gallop, ran over a stretch of level road, then down a bit of hill and across a culvert, down a bigger hill and across a bridge; then going up the next hill Mollie got them drawn in. She turned to Joey. He had never seen her enthusiastic before.

"Wasn't that a glorious ride?" she said. "Did you see them go? Wasn't it just glorious?"

to see him and brought him fruit and flowers, and told him how much they missed him. But still Joey did not get quite well. He did not like to be troublesome and fretful and keep his family running about for him and worrying about him, but he could not help telling them how badly he felt sometimes, and he could not help wanting things constantly. The worst of it was he was apt to want things that were very hard to procure. Sometimes it was fruit out of season, or some other dainty equally impossible to get. Once during one of his illnesses he conceived a great longing to see a cousin of his—a beautiful little baby girl who lived seventeen miles away. If he could just get to see this little creature he thought he would get better. At first they had tried to make him give up this notion, but it was in vain; so at last his mother got one of the men to hitch a horse to the buggy, and she started away. The child could not come without the mother, and the mother could not leave her home that day; but the next day Mrs. Madison brought them both home with her in triumph, and Joey had the beautiful little girl baby in his room all day. It may seem strange to relate, but he really began to get better after that.

However, it was not a beautiful little girl that Joey was longing to see this time. It was a beautiful big girl. It was Mollie Gordon. If he could just see her—just see Mollie once, he believed he could get well. And how heartless and unkind it was of her not to come and see him. Nearly all the other girls had been there, but it was just like her to remain away. "Just like her!" he said to himself over and over again, as he turned on his couch or tossed through the long, sleepless night. He could not send for her as he had for the little girl cousin. He was afraid even to tell his mother that he wanted to see Mollie. But after awhile he became reckless about it.

It was a dreary, rainy afternoon. Joey was ready to fly to pieces with nervousness, having scarcely slept an hour the night before. It had been the worst night yet. Bessie, his youngest sister, sat by his sofa, trying to quiet him.

"Dear Joey, isn't there anything on earth I can do for you?" she said for the twentieth time.

"Yes," said Joey at last. He lay back on the sofa with his eyes closed, and his face very determined. Bessie asked eagerly what it was. "What is it I can do for you, Joey?"

"I want to see Mollie Gordon!" said Joey.

Bessie started and looked astonished. "Why, Joey!" she said.

Joey's brows contracted nervously, but he did not open his eyes or speak.

"You are smitten with that girl, Joey!" said Bessie, in the tone of an accusation.

Joey did not deny it. "What if I am?" he said.

"Why, Joey! That's awful!" said Bessie. "I shall tell mother! She won't like it at all!" Bessie had evidently forgotten her role of nurse and comforter. Joey's nervous frown deepened, but he still said nothing.

"Mother doesn't want you to fall in love yet, Joey!" proceeded Bessie. "Ruth and Amy and I shall snub that Gordon girl. We won't speak to her at all!"

Joey started up, much excited. "Bessie!" said he, "if you girls or mother spoil my chances with Mollie Gordon—if you lay one straw in my way, or do anything to offend her, I'll never forgive you—never, as long as I live!"

He dropped back upon the sofa, white and exhausted. Bessie was alarmed and forgot the Gordon girl. "Dear Joey, don't feel so bad about it!" she said, caressing his cheek. "We'll fix it somehow. We'll agree about it some way or another!"

"We'll agree about it some way or another, will we?" cried Joey. "The only way on earth we'll agree about it is that you and the girls and mother be just as friendly to Mollie as you know how to be! That's how we'll agree about it! You shall make everything of her. It's hard enough to win her without your making it any worse."

Bessie was astounded. She knew, and her mother and sisters knew, that Joey was much interested in Mollie Gordon. They had been talking and worrying about it a good deal lately, but she had no idea that this was the state of her brother's feelings. He did not seem like their own dear Joey at all just now. She stared silently at him for a moment. She was an affectionate little creature, and Joey had always liked her the best of his sisters. She slipped down on the edge of his sofa, put her arms around his neck, and put her cheek to his.

"Dear Joey," she whispered, "please don't talk so to me! Don't you love me a bit? Have you shut me out entirely for her?"

There was a silence between them for a moment, then Joey spoke. "Bessie," said he, "will you take a note to Mollie Gordon for me?"

Bessie considered a moment. "If mother don't mind," she said. "I'll have to ask her, I'm afraid. You know, Joey, mother doesn't want you to get caught by any girl yet. You being the only boy she doesn't want to part with you till she has to. She always says you shan't leave her to get married till you're thirty-five."

Joey paid no attention to this. "I'll write the note right now if I can get over to that table," he said. "You may talk it over with mother if you like, but the note's got to go just the same. I'm going to tell Mollie to come to see me. The other girls have all been here, and she ought to come, but she's afraid it would cause talk. I suppose, I'm tired lying here thinking about her and wishing she'd come. I'm going to write."

(To be continued.)

2

WEIGHTS CARRIED BY SOLDIERS

The weights borne by the foot-soldiers of the principal European nations are as follows: Russian, 68 pounds; French, 62 pounds; British, 62 pounds; German, 61 pounds; Swiss, 59 pounds; Italian, 53 pounds; Austrian, 47 pounds.

THE ISLAND OF PORTO RICO

Porto Rico occupies the central place on the eastern frontier of the great American archipelago, the outpost of the Greater Antilles, and the watch-tower between the Bahamas and the Caribbees. The Mona passage on the west and the Virgin passage on the east are pathways to the South American coast. It is a commanding position between the two continents of the west, and upon the island rampart between the Atlantic ocean and the Caribbean sea. The most deliberate choice of a naval station in the West Indies could not have placed it better than the course of events which has put the island of Porto Rico at our disposal.

And it is an island well worth having—the real gem of the Antilles. A little more than a hundred miles long and a little less than forty miles wide, it has nearly the area of Connecticut. In spite of misrule, exhausting taxation, and a backward state of industry, it is a populous island, having more than 800,000 inhabitants, or about as many as Connecticut. This is because the soil is most prolific and the climate exceptionally salubrious; and twice as many people could live there in ease and comfort. Except for the irregular eastern end, Porto Rico is almost a parallelogram; and while there are bays and harbors at convenient distances all around its shores, the coast is less broken and less obstructed by reefs than those of any other considerable island in the West Indies. It has no large cities, but many small towns and villages, and well distributed. San Juan, the chief port on the northern shore, has barely 25,000 inhabitants, and Ponce, near the southern coast, the largest and wealthiest city on the island, has less than 40,000.

The chief physical characteristic of Porto Rico is its variegated and well-watered surface. The Sierra Cayey sweeps from west to east, though nearer the southern than the northern coast, with an average height of 1,500 feet, and, isolated from it in the northeast, the picturesque Triquillo culminates in the peak called El Ynnke, "the anvil," some 3,600 feet above the level of the sea. From the long, low mountain range many ridges start forth, with wooded slopes, fertile valleys and broad, rich plains, and there are more than a "thousand hills." Only here and there are the altitudes too great for cultivation, and the variety of level, with rich soil nearly everywhere, affords unusual possibilities of production. There are said to be 1,300 running streams on this island, of which forty-seven are considerable rivers, and yet one of the needs of the southern slope is irrigation, and one of the drawbacks of the towns is a lack of water supply. Nature's supply is unlimited, but man has not known how to utilize it. The real need is enterprise and industry.

Of the commercial value of Porto Rico as a possession there is no possibility of doubt. Under a government that discouraged enterprise and prevented improvement, with an almost complete lack of roads and bridges in the interior to make communication and transportation economical, with primitive methods of cultivation and practically no manufactures, and with a stifling system of taxation and official corruption, it has supported a relatively large population, and has a foreign trade of \$35,000,000 a year. What is it not capable of under an enlightened policy and with a systematic application of enterprise and industry? The mountain forests contain mahogany, ebony, logwood and other ornamental and useful materials, which may be dealt with as to become a permanent and inexhaustible source of wealth. The upper ranges of land afford the richest pasturage, and even now the raising of horses, cattle and sheep is a leading industry. The same levels are capable of producing great crops of fine cereals. Frost never comes, and the raising of tropical fruits can be extended indefinitely. The abundant rains are brought chiefly by the north-east trade-winds, and the short, southern slope of the mountain range is subject to occasional drought, but the soil is rich and may be easily irrigated. In the lower valleys and stretches of plain near the sea-coast the soil has an almost unexampled fertility.

What have been regarded as the staple crops are sugar, coffee and tobacco, but they have been raised in a crude fashion and upon a scale that can be enormously extended. As elsewhere, the cane-sugar interest has been under a depression on account of the European subsidizing of beet-sugar, but by improved methods and economies it can compete against this disadvantage, while the coffee culture could be vastly increased with certainty of profit. It has been the custom to send tobacco to Havana to be manufactured, and there has been little system in its cultivation. The quality is inferior to that of Cuba only because it has not been properly dealt with. Cotton grows in Porto Rico, which has an exceptionally long and strong white fiber, but little has been made of it. Rice is produced without flooding the land, and Indian corn grows luxuriantly. A continuous succession of crops can be raised throughout the year.

The climate is tropical, but there are no extremes of heat, save here and there and now and then on the lower coast-lands. The idea that a tropical climate is of necessity unhealthy or enervating is a delusion. It breeds disease only where there is a neglect of sanitary conditions and disregard of hygienic considerations. In San Juan, as in Havana, there is no system of drainage and little attention to cleanliness, and the penalty of fever is the consequence. The same is true of other towns similarly situated. There is no proper attention to the distribution of wholesome supplies of water in cities and towns, though it would be an easy and inexpensive matter. Suppose American enterprise and capital should go down to this island to put it in order and develop its resources! There is a railroad across from San Juan to Guayama, a short piece from Ponce to Coamo, on the south coast, and another from

San German to Aguadilla, on the west coast—about one hundred and twenty-five miles in all—but a girdle of railroad could easily be put around the island, with spurs running into the interior. Decent roadways, with bridges across the numerous streams, would give a new impulse to industry by making it easy for its products to get to market. It is admitted that gold, copper, iron, lead and coal "are found," but it is generally said "not in paying quantities." No adequate examination has been made to ascertain whether they can be obtained in paying quantities or not. American enterprise, once admitted, would speedily find out.

There is nothing in the tropical climate of Porto Rico to prevent our people from going thither, but the labor force already there has never been half utilized. The real Spanish element is small even in the cities. The white population is mainly like the native element of Cuba—creole descendants of European colonists alienated from the Spanish stock. There are many blacks, possibly a third of all the people, and much mixed blood, but the population is not ignorant or indolent or in any way degraded. It is not turbulent or intractable, and there is every reason to believe that under encouraging conditions it would become industrious, thrifty and prosperous. It is certain that a great advance could be made upon the present state of things, and the island could be rendered of no small commercial value to us and to its people.

There is no reason why it should not become a veritable garden of the tropics and an especially charming winter resort for denizens of the North. Apart from the attractions of climate and scenery, there is a quaint picturesqueness in the old Spanish towns, and many interesting associations with the infancy of America. Columbus, coming up from the Caribbees on his second voyage in November, 1493, came upon the southern coast and was delighted with its beautiful shores. He put in at the bay of Aguadilla on the west, and took water for his ships from the abundant springs which still pour out their limitless supply. He called the island, after his pious manner, San Juan Bautista, and went on his way to Hispaniola (Santo Domingo) to find the settlement he had made at Navidad, as a base for plundering the interior, utterly destroyed by the natives who were to be robbed.

In 1508 Ponce de Leon, who had become governor of the western province of Santo Domingo, came over and took possession of this fair island of the "noble part," and established its capital where it still bears the name given to the whole territory by the first discoverer. In the casa blanca, which still ornaments the variously tinted town of San Juan, he planned his expeditions in search of the fountain of perpetual youth, and from here he set forth on the quest which led to the discovery of the Florida coast, whose present name we owe to him—some say on account of the flowery aspect of the land and some on account of its discovery on Easter day. It matters not, but we owe to Ponce de Leon the close associations of our flowery peninsula with the verdant island of Puerto Rico; and perhaps the source of perpetual youth for nations was really found by the disappointed conquistador whom the Indians mortally wounded on our shores.

There are many relics of the aboriginal races of the Antilles in Porto Rico, including that curious horse-collar carved from stone, which is found nowhere else, and is supposed to have been associated with the religion or the burial superstitions of the natives. There are neglected opportunities for the study of American ethnology in the island, as well as political, naval and commercial advantages to be gained, and infinite attractions of tropic scenery and climate to be visited. Whatever may be said or thought of keeping the Philippines, there can be no question of the wisdom of taking and holding Porto Rico without any reference to a policy of expansion. We need it as a station in the great American archipelago, misnamed the West Indies, and Providence has decreed that it shall be ours as a recompense for suiting the last withering clutch of Spain from the domain which Columbus brought to light and the fairest part of which has long been our own heritage.—Amos K. Fiske, in New York Times.

AMERICANS ARE GREAT COFFEE-DRINKERS

More coffee and less tea, or a substitution of coffee for tea, seems to be the rule with the American people just now. The figures of the Treasury Bureau of Statistics show that the coffee importation of the past year has been the heaviest in the history of the country, and the tea importation the lightest in many years. The importation of coffee in the calendar year 1897 was over 800,000,000 pounds, and the 1898 figures will be about the same as those of 1897. In no earlier year were the importations ever as much as 700,000,000 pounds. This is the largest amount of coffee for each individual than was ever before consumed in the country, the per capita consumption being about eleven pounds annually, while no earlier year showed a per capita consumption of as much as ten pounds. Reduced to tons, the total for the year 1898 would be 400,000 tons, requiring for its transportation 27,000 cars, which, if grouped in a single train, would nearly reach from New York to Baltimore. The United States is by far the largest coffee-consuming country in the world, our own consumption being nearly double that of all Europe, and practically half of the coffee produced in the world. In only two countries—Holland and Denmark—is the per capita consumption larger than that of the United States, that of Holland being twenty-three pounds per capita, and of Denmark fifteen pounds, as against eleven pounds per capita in the United States, five and one fourth pounds in Germany, three and one fourth pounds in France, and less than one pound per capita in Great Britain.—United States Bureau of Statistics.

DANGER IN SODA

Serious Results Sometimes Follow Its Excessive Use

Common soda is all right in its place and indispensable in the kitchen and for cooking and washing purposes, but it was never intended for a medicine, and people who use it as such will some day regret it.

We refer to the common use of soda to relieve heartburn or sour stomach, a habit which thousands of people practice almost daily, and one which is fraught with danger; moreover the soda only gives temporary relief and in the end the stomach trouble gets worse and worse.

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THE OLD GARRET

Swing ajar the garret door.
How the rusty hinges creak!
Pause before you venture o'er
The old threshold, worn and weak.
Comes, as oft such question will—
Who knows what's beyond the sill?
Here all things are plain to see—
There all things are mystery,
Where all treasures are shut fast
In the storehouse of the past.

From the rafters overhead
Withered herbs, in dusty rows,
Hang like branches sere and dead;
But when'er a soft wind blows
Through the window's broken pane,
Faint, sweet fragrances again
From their leaves are shaken free,
As an old-time memory
In the cobwebbed minds of men
Stirs, and tries to live again.

Here the spider's web is spun
In the dust and in the gloom;
Here are woven, one by one,
In a viewless, noiseless loom,
Fabrics fit for fairy wear,
Frail as frost and quite as fair,
Showing patters rarer far
Than those of old laces are
When a light from heaven's blue
Shines the silken meshes through.

In that shadowy corner stands
An old cradle, and it seems
Slowly rocked by phantom hands
While a baby sleeps and dreams
On the pillow, long unpressed,
And a lullaby of rest
Trembles softly through the gloom
Of this memory-haunted room,
From the lips that long ago
Turned to dust where grave-flowers grow.

In that old, worm-eaten chest,
What quaint things are stored away!
Stomacher and "brodered vest—
Satin gown and wig of gray.
I can fancy phantom folk
Dancing at the midnight's stroke
In the garments hidden here
For who knows how many a year?
'Twere an eerie sight to see
Their grim, ghostly revelry.

Almost hidden from the sight
By the wreckage of the past,
In the dim and dusty light
From the cobwebbed window cast,
Shows a mirror, and therein
Many a ghost of what has been
Seems to rise and swiftly pass
Like a shadow o'er the glass.
In the depths of it I see
Things that almost frighten me.

Faces moldered into dust
Long ago look out at me
From the tarnished frame, whose rust
Mocks at human vanity.
As a shadow forms, for they
Form, and fade, and pass away,
Like the ripple on a stream,
Or the fancy of a dream.
Here—then lost in shadows vast,
The procession of the past.

Longer here I dare not stay,
For it somehow seems to me
We are transgressors to-day.
Shut the door and turn the key.
Leave it to the dead, who quit
Their old graves to visit it.
Whence they come or where they go,
What they come for—who shall know?
I shall solve the mystery
When the grass grows over me.

—Eben E. Rexford, in Boston Evening Transcript.

CHILDREN IN HOLLAND

Wandering through the crooked streets of the little fishing village of Scheveningen, from which the famous Dutch watering-place takes its name, writes a tourist, I heard merry shouts of laughter issuing from a garden inclosed by high walls. The gate was open and I peeped in. My curiosity was rewarded by one of the sweetest sights I ever witnessed. About twenty little Dutch maids and lads, their ages varying from three to six years, were enjoying a game of "tag," while a little attendant of about twelve years stood by, busily knitting while she watched them. A hell sounded. They all fell in line behind the little knitter and walked demurely two by two in a serpentine line around the garden and disappeared in a long hall, at the door of which each child took off its little wooden shoes and held them in one hand behind its back.

In the meantime the principal came out and invited me by signs to enter. In the hall I noticed the little sabots laid in an orderly manner side by side. There were three halls in this kindergarten. In each were fifty children between the ages of three and six years, the girls in gowns to their ankles, held out in balloon-fashion with haircloth petticoats, little white shawls pinned over the shoulders, and caps covering their straight, yellow locks.

At this free kindergarten the children of the fisherfolk, many of them fatherless, derive all care and attention. They are taught by the same methods used in Germany. All seemed bright and happy. In one room they were singing quaint little nursery rhymes about boats, so one little fellow made me understand by walking across the floor, rolling like a sailor and then going through the motions of rowing a boat and pulling in nets. He, with great glee, made me understand that he would be a fisherman when he was "so big," stretching up his arms and smoking an imaginary pipe. This amused the children so much and made them shout and laugh so loud that the teacher was obliged to send them to their seats and end the fun.

BACTERIA AND CHEESE-RIPENING

Bacteria are regarded more nearly vegetable than animal in their character, and therefore are proper subjects for study by botanists. The most important changes which occur during the ripening of cheese are those which affect the casein, this being gradually transformed from the firm, elastic and insoluble conditions found in a green cheese into the plastic and more or less soluble substances peculiar to a well-ripened product. The early explanations of these changes were purely chemical, but since the discoveries of Pasteur and others in the field of fermentation they have been attributed entirely to bacteria and other micro-organisms. Duclaux suggested that the changes in the casein were due to digesting organisms.

Later observers have shown that such organisms fail to develop in competition with the lactic acid type of bacteria, which are by far the most prominent species found in normal cheese. This type appears to be unable to digest casein to any considerable extent when grown in sterilized milk, unless their activity is greatly prolonged by neutralizing the acid as it is formed, in which case again the conditions do not conform to those found in normal cheese. Moreover, the ripening changes in cheese progress at a nearly uniform rate for a long time after bacterial development has greatly declined.

The authors of this paper were unable to reconcile the many apparent discrepancies of the biological theory of cheese-ripening until they attempted to sterilize milk for their experiments by the addition of mild antiseptics, such as ether and choloform, which could afterward be removed and thus avoid changes which might be produced by boiling the milk. Such milks, although sterile, passed through changes similar to those that occur in cheese. As the agents used in this case discriminate between organized and unorganized ferments, it is evident that milk contains an unorganized ferment capable of digesting casein. This enzyme is inherent in the milk itself. The authors have given to this ferment the name "galactase," and they believe it plays an important role in the proteolytic changes that occur in the ripening of cheese.—Science.

SPANISH NAMES

Every Spaniard has at least two surnames between which the conjunction "y" (and) is inserted. The reason is because the Spanish call themselves both by their father's and mother's names. Pi y Margall, the head of the federalistic republicans, and ex-president of the former Spanish republic, for instance, is so called because his father's name was Pi and his mother's Margall. In every-day life most Spaniards are satisfied with bearing one name—for example, Sagasta, Castelar—and in such cases the y assumes at pleasure the surname of either parent. In most cases there are considerations of esthetics that determine their choice. The names Perez, Fernandez, Lopez, Martinez, etc., are in Spain as common as in America the Browns, the Smiths, the Jones. Those Spaniards who belong to such families assume, partly in order to avoid confusion, partly to be in possession of a less common name, either the maternal name alone (provided it sounds better) or the surnames of both parents, with or without an inserted "y." Such names are those of the writers Perez Galdos, Fernandez y Gonzales; of the generals Lopez Dominguez, Martinez Campos; of the politicians Romero Robledo, Moret y Prendergast, etc. Most Spaniards are noblemen, since everyone whose ancestors were the owners of a house of his own (casa solariega) has a claim to the title of nobility. But the particle "de" in a name is not always indicative of the person's nobility. A woman after marriage retains her maiden surname, and only adds to it the particle "de" with her husband's surname. Thus the visiting-cards of the deceased wife of Sagasta, whose father called himself Vidal, read Angela Vidal de Sagasta, which means as much as Angela Vidal, wife of Sagasta. It is interesting to note that the husband never adds his wife's name to his own. A widow never inherits her husband's names or titles, but assumes her maiden name, and only occasionally will add "Viuda de" (widow of), followed by the deceased husband's name. So you see that the particle "de," especially in a woman's name, by no means indicates that its bearer belongs to the nobility.—New York Mail and Express.

ANIMALS OF HERALDRY

Perhaps lovers of heraldry will admit that whatever their other accomplishments may have been, the heralds of old were not usually observant naturalists. Birds, beasts, fishes and reptiles, it is almost needless to say, have always entered largely into that art which cynics term "the science of fools with long memories," but which the student more justly defines as "the shorthand of history," as will be shown by a glance at any of the numerous books on the subject. Lions, tigers, leopards, bears, elephants, wolves, foxes, rabbits, squirrels, monkeys, beavers, porcupines, horses, asses, camels, bulls, greyhounds and other dogs, rams, hoars, etc., to confine one's remarks to animals only, can always easily be found, if not at once recognized, and the mistake of Le Glorieux, in "Quentin Durward," who mistook Toison d'Or's device of an ounce or tiger-cat behind a grating for a "cat looking out at the dairy window," may still find followers even in the present day, when one reads, for instance, that the heraldic antelope has the head of a stag, a unicorn's tail, a tusk issuing from the tip of the nose, a row of tufts down the back of the neck and similar tufts on the tail, chest and thighs.—The Field.

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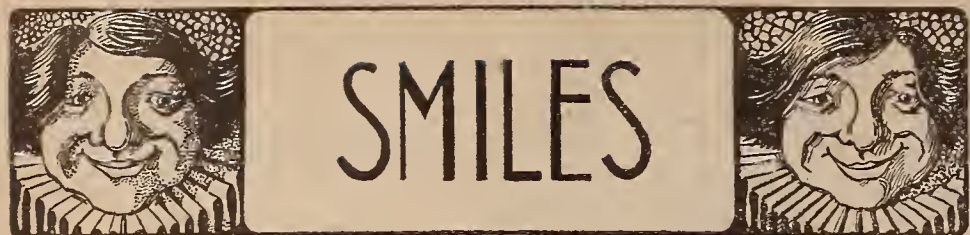


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THE SONG OF THE CHECK-BOOK

Thin am I where I once was thick,
Scared-up cover and sunken chest;
Out of my body they've had their pick.
Both my sides to my back are pressed,
Every leaf of my make-up's tossed
Out in the business stream to drift;
Greatly depressing has been the cost,
Gone to pay for a Christmas gift.

Presents by dozens my master bought,
Took my plumpness the bills to pay;
One fell week all the havoc wrought,
Leaving me thin as I am to-day.
Gone for vases and books and chairs,
Every leaf had a load to lift,
Filled with figures, strewn everywhere,
Gone to pay for a Christmas gift.

Now I am sunken and frail and thin,
Gone each stay of my back's support,
Mad the strife that I mingled in,
Clear to the last did I hold the fort.
Worn-out type of the check-book race,
Into the garret I'll have to drift;
Leaves departed, but stults in place—
Gone to pay for a Christmas gift.

—Roy Farrell Greene.

MAMA'S SUNSHINE

Does you know why my dear ma'ma
Makes a birthday cake for me?
Why she twines it wiv pink candles?
An' hangs pwesents on a twee?
Why she asks 'e kinder-garten
In 'e afternoon to tea?
It's because she is so happy
That I came to live wiv she!

—Little Folks.

SHE HAD HER WAY

I SHALL have to ask you for a ticket for that boy, ma'am."
"I guess not."
"He's too old to travel free. He occupies a whole seat, and the ear's crowded. There are people standing up."
"That's all right."
"I haven't time to argue the matter, ma'am. You'll have to pay for that boy."
"I've never paid for him yet, and I am not going to begin now."
"You've got to begin some time. If you haven't had to put up fare for him you're mighty lucky or else you don't do much traveling."
"That's all right."
"You'll pay for that boy, ma'am, or I'll stop the train and put him off."
"That's all right. You put him off if you think that's the way to get anything out of me."
"You ought to know what the rules of this road are, ma'am. How old is that boy?"
"I don't know. I never saw him before. If you want a ticket for him you'd better ask that old gentlemans down the aisle. He got on with him."—Philadelphia Press.

IT HAD COME AT LAST

A young married woman one morning gave her husband a sealed letter, which he was to read when he got to his office. He did as he was told, and the letter ran as follows:
"I am obliged to tell you something that may give you pain, but there is no help for it. You shall know everything, whatever be the consequence. For the last week I have felt that it must come to this, but I have waited until the last extremity, and can remain silent no longer. Do not overwhelm me with bitter reproach, for you will have to put up with your share of the trouble as well as myself."

Cold perspiration stood in thick drops on the brow of the husband, who was prepared for the worst. With a trembling hand he turned over the page and read on:

"Our coats are all gone. Please order a load to be sent this afternoon. I thought you might forget it for the tenth time, and therefore wrote you this letter."

But he didn't.—Pearson's Magazine.

A LETTER TO BE PONDERED OVER

A gentleman who is much interested in the raising of hogs, and is becoming well known by the introduction of an excellent variety among the farmers of the Northwest, is said to have received a letter awhile ago which looks so many ways that he does not know whether to be pleased with it or not. It began:

"My dear sir: I went yesterday to the fair at A—. I found several pigs of your species. There was a larger variety than usual, and I was surprised at not seeing you there."—Cypress River (Man.) Western Prairie.

WELL NAMED

"This is the parlor, eh?" tentatively remarked the agent, who was looking over the house.
"Yes," replied old man Kidder, "but I usually call it the court-room—I've got seven daughters, you know."—Boston Journal.

THE CAT KICKED

A North Dakota boy, the precocious son of a Baptist clergyman, has inherited all the traditional baptism-by-immersion principles, and by close attention given the ceremony, as performed by his parent, is able to repeat it word for word.

A few days ago he had a tub of water in the kitchen, and, eating the family cat and her two kittens, he proceeded to teach them one of the essential rites of the Baptist church. The kittens underwent the ordeal without protest, but the cat showed her displeasure by scratching the boy's face.

Throwing the offending animal down, he said, in disgust:

"D—n it, then, be a Methodist if you want to!"
—Lakota (N. D.) Herald.

A NOVEL ADVERTISEMENT

A Russian shopkeeper with an eye to immediate returns is said to have posted an announcement to the effect that the reason he had hitherto sold so cheaply was that he was unmarried and did not need profit for the maintenance of a wife and family. The advertisement closed as follows:

"It is now my duty to inform the public that this advantage will shortly be withdrawn from them, as I am about to be married. They will therefore do well to make their purchases at once at the old rates."

The result was that there was such a run on the shop that in the course of a few days the shopkeeper had made enough money to pay the expenses of his wedding.—Argonaut.

HAD A PROMPT EFFECT

The Hunter (N. D.) "Herald" says that a Grandin girl took a header from her wheel and was jarred into unconsciousness. Methods of resuscitation were immediately applied, without seeming result, until a benevolent-looking gentleman with spectacles said:

"Rub her neck."

At this the young woman came to her senses. Tears came, also, and she repressed a cry of anguish, as she screamed:

"Rubberneck yourself, you old fool!" and she was so mad she couldn't cry.

THE NEW-COMERS ALL RIGHT

Mrs. Bronston—"We must call on our new neighbors as soon as they get settled."

Mr. Bronston—"Who are they?"

Mrs. Bronston—"I don't know."

Mr. Bronston—"Have you seen them?"

Mrs. Bronston—"No."

Mr. Bronston—"Then what do you know about them?"

Mrs. Bronston—"Every bit of their furniture was covered with canvas."—Boston Globe.

SMACKS OF THE EMERALD ISLE

Mrs. Brownjohn—"Good gracious, Bridget! What is that dreadful patch of oil on the carpet?"

Bridget—"Shure, ma'am, an' it's that haste of a lamp!"

Mrs. Brownjohn—"Did you upset it, then?"

Bridget—"That I didn't, ma'am. I just turned it down, as you told me, ma'am, before blowin' it out, an' shure there must have been somethin' gone quare with the top av it, for the oil came pourin' out on the floor, just as you see it, ma'am!"
—Nuggets.

THE SCOTCH OF IT

Sir William Long tells a story of an old Scotch body who could not abide long sermons. She was hobbling out of Kirk one Sunday when a coachman, who was waiting for his people, asked her, "Is the minister dune wi' his sermon?"

"He was dune lang syne," said the old lady, impatiently, "but he winna stop!"—New Brunswick Advertiser.

PAT AND THE DONKEY

An Irishman, seeing a donkey ready saddled, and thinking of having a cheap ride, jumped on his back.

He had not gone far when the donkey started kicking and jumping about, so much so that he got his hoof hung up in one of the stirrups.

"Shure," says Pat, "if you're going to get on, I'm going to get off."—Spare Moments.

NOT VERY COMFORTING

Staylight—"Tommy, do you think your sister is fond of me?"

Tommy—"I don't know. She gave me a quarter to set the clock half an hour fast."—Jewish Comment.

LISTEN TO THE GLEEFUL NEWS

Customer—"Really, now, are these eggs fresh?"
Grocer—"Madam, if you will kindly step to the telephone and call up our farm you can hear the hens that laid those eggs still cackling."—New York Weekly.

The Finest Garden

In the neighborhood this year will be yours—if you plant Maule's Seeds. My new Seed and Plant Book for 1899 contains everything good, old or new. Hundreds of illustrations; four colored plates; complete up-to-date cultural directions. Full of business cover to cover. A 600 page Year Book and Almanac with complete weather forecasts for 1899, free with every order of \$1.50 or upward for

Maule's Seeds

I send the best Agricultural Weekly in the U. S. for only 25 cents per annum. Ten packets of the newest novelties in Sweet Peas, only 20 cents. It also gives rock bottom prices on the best Onion Seed in America. It is pronounced by all the brightest and best seed hook of the year, and you need it before placing your order for 1899. Mailed free to all who mention having seen this advertisement in the FARM AND FIRESIDE

WM. HENRY MAULE, 1711 Filbert St., Philadelphia, Pa.

ALL FOR TEN CENTS.

Aster, Market Queen, 23 sorts mixed. *Petunia*, New rich bedding, 25 kinds. *Chrysanthemum*, 25 kinds mixed. *Pinks*, New Japan, double and single. *Lobelia*, New Perpetual, rich blue. *Poppy*, New dwarf Paeony, 13 kinds. *Mignonette*, Sweet, New Giant Red. *Schizanthus*, Butterfly flower, max. *Nasturtium*, climbing, 15 varieties. *Sweet Peas*, New Large-fl., 24 kinds. *Nicotiana*, New Jasmine-scented. *Ten Weeks' Stock*, double, 33 sorts. *Pansy*, New English-faced, 25 kinds. *Zinnia*, New Lilliput, double, mixed. 10 cts pays for these 14 pkts. first-class, warranted seeds, enough for a whole flower garden. Not cheap seeds. Best to be had. Cultural GUIDE and PARK'S FLORAL MAGAZINE 3 mos. included. New Cuspid Phlox, New Jap. Aster, Forget-me-not, D'bl. Feverfew, D'bl. Daisy, or Marg't. Pink for club of 2, all for club of 5. Club with friends. GEO. W. PARK, B 91, Libonia, Pa. GET MY BEST OFFER. DON'T MISS IT.

GET THE BEST.

Buy your Strawberry Plants of W. F. Allen, Jr., who undoubtedly has the largest stock and finest selection of vigorous, healthy plants in the world. This stock is of his own growing and he knows that it is pure. HE CROWS ALL THE PLANTS THAT HE SELLS and they are as fresh dug at the time of shipment. No cellar-stored, reshipped and repacked stock. 32-page illustrated and descriptive catalogue free. Address W. F. ALLEN, JR., BOX 21, SALISBURY, MD.

FRUIT AND ORNAMENTAL

TREES
AT REASONABLE PRICES.

Small Fruits, Grapes, Shrubs, Climbing Plants, Roses, Evergreens, Hardy Plants, Paeonies. Largest and choicest collections in America.

BEST NOVELTIES
Descriptive Illustrated Catalogue free.
ELLWANGER & BARRY,
MOUNT HOPE NURSERIES, Rochester, N. Y.
Fifty-ninth Year.

CARMAN,

A money maker, better than Elberta, grand shipper, ripens with Early Rivers. Every fruit grower should have it. Immense stock of Peach, Enormous supply of Small Fruits. Headquarters for Ornamental Trees, Roses, Shrubs. 44 Greenhouses filled with Palms, Ficus, Ferns, Roses, Geraniums, etc. Correspondence solicited. Catalogue and Price List Free. THE STORRS & HARRISON CO., Box 229 Painesville, O.

Hold On

to a good thing when you find it. The planter who once reads Gregory's Seed Book—who once plants Gregory's Seeds, will never begin a season's work without them.

Gregory's Seeds

represent the highest development of scientific seed culture. Gregory's seed book contains the best of seed and flower facts. The book is free to all—the seeds cost no more than the ordinary kind. Send for book at once. JAMES J. H. GREGORY & SON, Marblehead, Mass.

GREGORY'S SEED CATALOGUE

FOR 1899

SEED DUE BILL FREE

To get new customers to test my seeds I will mail my handsome catalogue for 1899, lithographed and beautifully illustrated, and a 10c. Due Bill, good for 10c. worth of seeds for trial, absolutely free. It is full of bargains. All the Best Seeds, Bulbs, Plants, Roses, new Fruits, Farm Seeds, Potatoes, etc., at lowest prices. Ten Great Novelties offered without names. I will pay \$50. FOR A NAME for each. Don't buy your stock until you see this new catalogue. Several varieties shown in colors. Great inducements for orders this year. You will be surprised at my bargain offers. Send your address on Postal to-day. Tell your friends to send too. Old customers will receive a copy. F. B. MILLS, Seedsman, Box 46, Rose Hill, N. Y.

Grape Vines

Low prices. Descriptive list free. Extra fine stock CURRANTS, Gooseberries, CAMPBELL'S EARLY Grape. Quality extra. Warranted true. T. S. HUBBARD CO., Fredonia, N. Y.

\$3 a Day Sure

Send us your address and we will show you how to make \$3 a day absolutely sure, we furnish the work and teach you free, you work in the locality where you live. Send us your address and we will explain the business fully, remember we guarantee a clear profit of \$3 for every day's work, absolutely sure, write at once. ROYAL MANUFACTURING CO. Box 683, DETROIT, MICH.

A FIRST CLASS POTATO PLANTER

That EVERY FARMER Can Afford to Buy. Special Introductory Price this year to farmers. Now is your chance. Don't fail to write us at once. SCHOFIELD & CO., Manufacturers, Freeport, Ill.

MY Catalogue of STRAWBERRY PLANTS FREE 100 varieties. E. J. HULL, OLIPHANT, PA.

\$1800. FOR FOUR TOMATOES

This is a wonderful Tomato. Immense size, best quality and will astonish all who grow it. Color bright red, very solid, few seeds and free from rot. Fruits ripen from July 4 till frost. We paid \$500. for one weighing 3 lbs. 3 1/2 oz., and Offer \$1800. Cash for fruit this year as follows: For one weighing 4 lbs. \$1000. 3 1/2 lbs. \$500. 3 lbs. \$250. 2 1/2 lbs. \$50. See what you can do. Instructions sent with seed.

\$300. FOR 6 NAMES!

Catalogue for 1899 is beautifully lithographed in colors and is full of new things. We have a new Cabbage, Lettuce, Aster, Poppy, Pansy and Sweet Pea. Not one has been named and we will pay \$50. Cash for a name for each. Special Offer: We will mail one packet Mammoth Tomato also one packet each of the 6 namesless novelties and catalogue with instructions for 25c. If you send Silver or M. O. we send 50 Summer Flowering Bulbs for the ladies. FAIRVIEW SEED FARM Box 46 Rose Hill, N. Y.

The 20th edition of the New Guide to Rose Culture, the leading Rose Catalog of America, will be sent free on request. 132 pages, superbly illustrated. Describes 75 entirely new roses and all old favorites. Makes success with D. & C. Roses possible to all. Describes all other desirable flowers. Free sample of our magazine. Success with Flowers, on request. The Dingee & Conard Co., West Grove, Pa.

DANDY ROSES

Is simple, strong and durable, sows all kinds of seeds perfectly even, saves 1/2 labor, 1/2 of seed, sent on trial, (sold cheap), price and circulars free. Address Champion Seeder Co., Urbana, Ind.

450,000 TREES

200 varieties. Also Grapes, Small Fruits, etc. Best root-ed stock. Genuine, cheap. 2 sample currants mailed for 10c. Desc. price-list free. LEWIS KOESCH, Fredonia, N. Y.

STRAWBERRY

Plants. Largest and choicest stock in the world (50,000, 100 varieties.) Lowest prices. Safely and cheaply delivered anywhere on continent. Catalogue free. Continental Plant Co., Strawberry Specialists, 29 South St., Kitterell, N. C.

WANTED 10 or more names of fruit growers, for which we will mail 5 new Strawberry Plants and catalogue of "Fancy Fruit" tree. Enclose stamp. W. N. SCARFF, New Carlisle, Ohio.

GOOD PAY TO GOOD MEN, enclose stamp. Manu. Adv. Co., Dept. H. 114 W. 34th St. N. Y.

OUR MISCELLANY

NO PREVIOUS Prince of Wales has been a grandfather.

It takes 72,000 tons of paper to make the postal-cards used in the United States each year.

THERE are three times as many muscles in the tail of a cat as there are in the human hands and wrists.

Now 6 cents. (Par \$1.) Gold Mining Stock. Send Address for Booklet. F. A. Williams, Secretary, Box 495, Denver, Colo.

THE largest proportion of single persons is found in Ireland and Scotland, and the smallest in the United States.

Green's Nursery Co., Rochester, N. Y., is too well known to require extended comments. Any and all who are interested in nursery stock are advised to write for their new catalogue.

RECENT observations among Indians show that in South America as well as in North America the red-woman lives longer than the red-man. But the average duration of life is only seventeen years for both sexes in the South, and twenty-two per cent of the Indians die during the first year of life.

GIRLS OF THE PHILIPPINES

The Philippine girls are interesting, but only a few are pretty. They are extremely graceful, as straight as arrows and always picturesque. A girl becomes a young lady at twelve or thirteen, a mother about three years later, and a grandmother at thirty-five; but even at the advanced age of fifty she is still supple and graceful and picturesque. Those who were at the World's Fair, in Chicago, may remember the beautiful Samoan girls in the Samoan village. The type of beauty is very nearly the same, and seems to be common with nearly all the Pacific islanders and the Malays. The skin is yellow or brown, the hair straight and shiny black, the eyes soft and lustrous, and the teeth white, except where the habit of chewing the betel-nut has left them red and repulsive. The women are modest to the last degree, do not know what flirting is, and are hospitable and womanly. The practice of smoking is general, and even little girls scarcely eight years old may frequently be seen smoking enormous cigars. The children go naked until they are six or seven years old, and then they graduate into a short skirt, and a little while later into about the same style of clothes as are worn by the grown people. The mothers carry their children astride on their hips.—Chicago Record.

WALL PAPER WAR

The big wall paper combination on one side and anti-combination manufacturers on the other are forcing the price of wall paper lower than it was ever known before.

Sears, Roebuck & Co., of Chicago, are supplying the finest grades of wall paper made by factories outside of the combination, at less than one half the prices most dealers charge.

They will mail to any of our readers, free (post-paid) for the asking, a large book of wall paper samples with lowest prices, directions how to order, etc. If you need wall paper don't fail to write to Sears, Roebuck & Co.

HOW ROYALTY MANAGES SERVANTS

A strange institution, but one that works admirably, was organized by the queen and Prince Albert early in their married life at Windsor Castle. It is known as the Committee of the Queen's Household, and is composed of the higher officers who serve in the royal establishment. All domestic differences and back-stair bickerings are laid before this little court. Its members go to the root of all quarrels and complaints, and give judgment upon them. Very serious cases are laid, with the judgment of the committee, before the queen herself. In addition to modern rules for the guidance of the queen's servants there hangs in the servants' hall at Windsor Castle an old black-letter document, on which is printed the following advice to those concerned: "Twelve good rules found in the study of Charles I. of best memory: Profane no divine ordinances; touch no state matters; urge no healths; pick no quarrels; maintain no ill opinions; encourage no vice; repeat no grievances; reveal no secrets; make no comparisons; keep no bad company; make no long meals; lay no wagers. These rules observed will maintain thy peace and everlasting gain."

\$5.00 a Day Sure This Winter for Men and Women

Let Prof. Gray start you in the plating business, doing plating and selling his famous outfits. New plan, new business, no experience needed. Demand for plating enormous. Profits immense. Be a money-maker. Don't be hard up. He makes a genuine offer, agrees to teach you free this sure paying business, and wants to appoint a good person in every district. Others are making \$5.00 to \$15.00 a day, so can you. Write quick, stating age, experience, references, etc., to GRAY & CO., Plating Works, Cincinnati, Ohio.

EMERSON AND THE WOODPECKER STORY

"No squirrel works harder at his pine-nut harvest than the carpenter woodpecker in autumn at their acorn harvest," says John Muir in the December "Atlantic," "drilling holes in the thick, corky bark of the yellow pine and incense cedar, in which to store the crop for winter use; a hole for each acorn so nicely adjusted as to size that when the acorn, point foremost, is driven in, it fits so well that it cannot be drawn out without digging around it. Each acorn is thus carefully stored in

a dry bin, perfectly protected from the weather, a most laborious method of stowing away a crop, a granary for each kernel. Yet they never seem to weary at the work, but go on so diligently they seem determined that every acorn in the grove shall be saved. They are never seen eating acorns at the time they are storing them, and it is commonly believed that they never eat them or intend to eat them, but that the wise birds store them and protect them solely for the sake of the worms they are supposed to contain. And because these worms are too small for use at the time the acorns drop, they are shut up like lean calves and steers, each in a separate stall, with abundance of food to grow big and fat by the time they will be most wanted, that is, in winter, when insects are scarce and stall-fed worms most valuable. So these woodpeckers are supposed to be a sort of cattle-raisers, each with a drove of thousands, rivaling the ants that raise grain and keep herds of plant-lice for milk-cows. Needless to say, the story is not true, though some naturalists even believe it. When Emerson was in the park, having heard the worm story, and seen the great pines plugged full of acorns, he asked (just to pump me, I suppose), 'Why do the woodpeckers take the trouble to put acorns into the bark of the trees?' 'For the same reason,' I replied, 'that bees store honey and squirrels nuts.' 'But they tell me, Mr. Muir, that woodpeckers don't eat acorns.' 'Yes, they do,' I said, 'I have seen them eating them. During snow-storms they seem to eat little besides acorns. I have repeatedly interrupted them at their meals, and seen the perfectly sound, half-eaten acorns. They eat them in the shell as some people eat eggs.' 'But what about the worms?' 'I suppose,' I said, 'that when they come to a wormy one they eat both worm and acorn. Anyhow, they eat the sound ones when they can't find anything they like better, and from the time they store them until they are used they guard them, and woe to the squirrel or jay caught stealing.'

BE TRUE TO YOURSELF

Don't be humbugged. You know that Alcock's Porous Plasters are the best plasters. So does your druggist. But he may have some other which he claims to be just as good as Alcock's or better than Alcock's. Don't accept them. Alcock's are the original and you will find that they will stick by you through thick and thin and do their work all the time.

RECENT PUBLICATIONS

CATALOGUES RECEIVED

Peter Henderson & Co., 35 and 37 Cortlandt St., New York. The title, "Mannual of Everything for the Gardener," concisely describes this complete catalogue.

R. H. Shumway, Rockford, Ill. The Illustrated Garden Guide is unsurpassed in number and size of illustrations.

W. F. Allen, Jr., Salisbury, Md. Special catalogue of the "largest strawberry nursery in the world."

C. E. Whitten's Nurseries, Bridgman, Mich. Catalogue of small fruit-plants. Specialty—fine strawberry-plants.

Ford Seed Co., Ravenna, Ohio. Nineteenth annual catalogue—"Most and Best Seeds for the Money."

Wm. Carson & Sons, Rutland, Ohio. Catalogue of new and standard small fruits at reasonable prices.

S. Y. Haines & Co., Minneapolis, Minn. Select list of highest grade flower-seeds.

Cole's Seed Store, Pella, Iowa. Cole's annual for 1899 listing the cream of standard varieties of garden and flower seeds.

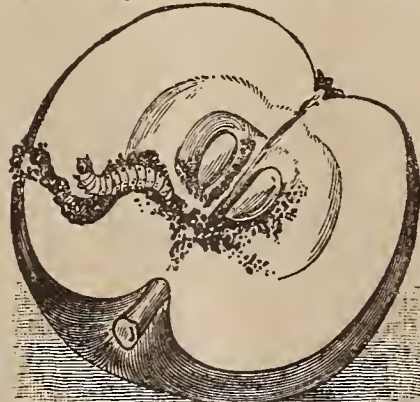
Iowa Seed Co., Des Moines, Iowa. Twentieth annual catalogue of choice garden, field and flower seeds.

Reliable Incubator and Brooder Co., Quincy, Ill. Complete illustrated catalogue of incubators, brooders and poultry-keepers' supplies.

G. Camerer, North Madison, Ind. Circulars of standard and vineless sweet-potato plants, and Golden Wyandotte chickens.

SPRAYING FRUIT-TREES

The question of spraying fruit-trees to prevent the depredations of insect pests and fungous diseases is no longer an experiment, but a necessity.



Our readers will do well to write Wm. Stahl, Quincy, Illinois, and get his catalogue describing twenty-one styles of Spraying Outfits and full treatise on spraying the different fruit and vegetable crops, which contains much valuable information, and may be had for the asking.

COLD WEATHER SICKNESS

Dr. Slocum, of New York City, Says that Consumption Germs Do Their Deadliest Work at a Time When the Germs of Other Diseases are Dying of the Cold

A FAMOUS SCIENTIST'S MOST WONDERFUL DISCOVERY

Consumption, Lung Troubles, and Other Cold Weather Sicknesses Annihilated by His Scientific System of Treatment, a Complete Course of Which is Offered Free to All Our Readers

Cold weather means hard work for your lungs.

Hard-work is good for strong people, but death to weak.

That's why cold weather is death to thousands who suffer from weak lungs.

There is a danger point for all people with weak lungs beyond which it is not wise to allow their lungs to go.

Weak lungs may last you for years, but if you once get past the danger point, and stay there, there can be but one ending, Consumption.

The proofs that you have passed the danger point come quickly enough: cough, cold, sore throat, pain in the lungs, fever, night sweats, loss of sleep and of appetite, loss of flesh or wasting away—all tell the tale too truly.

When your lungs are weak, there is room for the consumption germ to grow, and it grows all too quickly when it once gets started.

Time was when every consumptive was doomed. But that time, thank God, is past.

By the untiring efforts and brilliant genius of one of the world's greatest scientists a lifetime of labor and research has been crowned with success.

Consumption can now, by the new system of treatment of this eminent physician, be rendered null and void.

It can be prevented.

It can be cured.

Future generations will see it no longer upon earth.

As Dr. Alexander Hill, Master of Downing College, and Vice-Chancellor of Cambridge University, England, said, consumption is now to be classed as "one of those mysterious diseases which are absolutely preventable."

Dr. Slocum has made it so.

With a liberality, born of true greatness and broad-mindedness, the discoverer of this new system of curing consumption and building up weak lungs offers to send to every one of our readers who will write for it, a complete free course of his treatment consisting of three large bottles of his preparations.

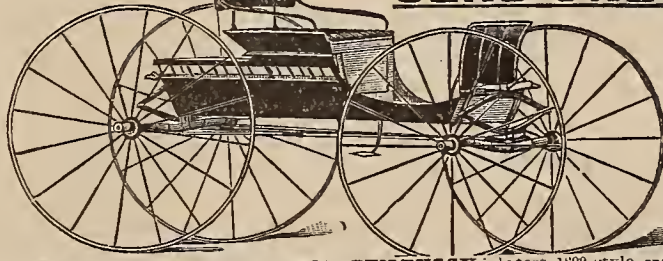
The system consists of three remedies which act simultaneously and supplement each other's curative action.

Every first-class druggist dispenses the Slocum System of Treatment in original packages, with full directions for use.

Merely send your name and full address to Dr. T. A. Slocum Laboratories, 98 Pine Street, New York, when you will receive the three free bottles at once.

Write, then, without delay, and kindly mention FARM AND FIRESIDE. Do not wait till weak lungs become weaker or until the germ appears, but take advantage while there is yet time, of this broad and liberal offer.

SEND ONE DOLLAR



for 500 miles from either point. THIS OPEN BUGGY is latest 1899 style, end spring, as illustrated, or side bar spring. Narrow or wide track. Body is Corning style, 25 inches wide, 50 inches long, made from selected seasoned stock; corners rounded and mitered; sills mortised, screwed, glued and plugged. Springs, highest grade stock, double refined oil tempered. Gear, made from second growth hickory. Coleman fifth wheel 15-16 inch double collar, Swaged Denton crystal steel axle; double reach ironed full length, bolted and braced throughout. Wheels, No. 1 grade Saven's patent, made from selected second growth hickory. Painting, body highly finished and painted black with neat striping; gear, dark brewster green or carmine. Trimming, upholstered in Ullman leather, patent leather dash; toe carpet, whip socket, anti-rattlers and shaft. Extra for pole in place of shaft, \$1.60. 200 will be sold at \$19.95. Order at once. Don't delay. We will save you \$10.00 to \$20.00. For Buggies at \$16.50 and up, and Top Buggies of our own make, finest work from our own factory at \$25.00, sent anywhere to examine, write for Free Buggy Catalogue.

SEARS, ROEBUCK & CO. (Inc.) Chicago, Ills.

How Do You Cultivate

By the old method or the new—the Hallock Success Anti-clog Weeder method, the method that is bringing increased crops with less work, saving time and money, doing cleaner, quicker work than three ordinary cultivators?

Hallock's Success Anti-Clog Weeder AND CULTIVATOR

is the greatest farm implement of the century. Write for descriptive circulars and testimonials. Special Price on the first order from every district where we have no agency; and the agency goes with the first order. Write to-day.

D. Y. HALLOCK & SONS, Box 804, York, Pa.

SAVE \$8 ON A HARNESS!

We are the largest manufacturers of harness and carriages in the world selling to the consumer exclusively.

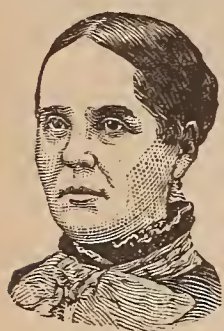
WE HAVE NO AGENTS, DEALERS OR MIDDLEMEN.

We sell you direct from the factory at wholesale prices and save you all additional expense. We ship anywhere for examination. We guarantee and warrant everything.

This Elegant Team and Farm Harness for \$19.50 Many customers who have bought it report that they have saved from \$8 to \$10 in buying this harness from us. For full description of this and 60 other styles of harness and 125 styles of vehicles see our new illustrated Catalogue. Your name on a postal card will get it.

ELKHART CARRIAGE & HARNESS MFG. CO. W. B. PRATT, ELKHART, INDIANA.

A Strange New Shrub that Cures Kidney and Bladder Diseases, Rheumatism, etc.—Free.



Mrs. Fowler, Locktown, N.J.

Disorders of the Kidneys and Bladder cause Bright's Disease, Rheumatism, Gravel, Pain in the Back, Bladder Disorders, difficult or too frequent passing water, Dropsy, etc. For these diseases a Positive Specific Cure is found in a new botanical discovery, the wonderful KAVA-KAVA Shrub, called by botanists, the *piper methysticum*, from the Ganges River, East India. It has the extraordinary record of 1,200 hospital cures in 30 days. It acts directly on the Kidneys and cures by draining out of the Blood the poisonous Uric Acid, Lithates, etc., which cause the disease.

Rev. W. B. Moore, D. D., of Washington, D. C., testifies in the *Christian Advocate*, that it completely cured him of Kidney and Bladder Disease of many years' standing. Hon. B. C. Wood, of Lowell, Ind., writes that in four weeks the Kava-Kava Shrub cured him of Rheumatism and Kidney and Bladder disease after ten years' suffering, the bladder trouble being so great he had to rise ten to twelve times during the night. Many ladies, including Mrs. C. C. Fowler, of Locktown, N. J., and Mrs. James Young of Kent, Ohio, also testify to its wonderful curative powers in Kidney and other disorders peculiar to womanhood.

That you may judge of the value of this Great Discovery for yourself, we will send you one Large Case by mail FREE only asking that when cured yourself you will recommend it to others. It is a Sure Specific and cannot fail. Address, the Church Kidney Cure Company, No. 409 Fourth Avenue, New York City.

SEND ONE DOLLAR...

Cut this ad. out and send to us and we will send you this **HIGH-GRADE ACME 600 lb. PLATFORM SCALE** by freight, C. O. D., subject to examination, you can examine it at your freight depot and if found perfectly satisfactory, exactly as represented and equal to scales that retail at \$25.00, pay the railroad agent our special price, \$9.37, less the \$1.00 or \$3.35 and freight charges. The shipping weight is 155 lbs. and the freight will average 75c for each 500 miles and we guarantee safe delivery. The Acme for farm, store or warehouse is the best platform scale made, guaranteed five years and will last a lifetime. Will weigh 600 lbs. by using all weights furnished. Brass beam weighs 50 lbs., has Stevens' Brass Biding Poise. Platform is 15x22 inches, resting on adjustable chills bearings, has Denton steel pivots, most sensitive, accurate and durable scale made, mounted on four large wheels, they are nicely painted and ornamented and beautifully finished throughout. Every farmer will save twice the cost in one season by weighing the grain he sells and buys. ORDER AT ONCE before the price is advanced. Catalogue of scales free for the asking. Address,

SEARS, ROEBUCK & CO., (Inc.) Chicago, Ill.

\$2.75 BOX RAIN COAT
A REGULAR \$5.00 WATERPROOF MACKINTOSH FOR \$2.75
Send No Money. and send to us, state your height and weight, state number of inches around body at breast taken over vest under coat close up under arms, and we will send you this coat by express, C. O. D., subject to examination, examine and try it on at your nearest express office and if found exactly as represented and the most wonderful value you ever saw or heard of and equal to any coat you can buy for \$5.00, pay the express agent our special offer price, \$2.75, and express charges. **THIS MACKINTOSH** is latest 1899 style, made from heavy waterproof, tan color, genuine Davis Cover Cloth; extra long, double breasted, Sager velvet collar, fancy plaid lining, waterproof sewed, strapped and cemented seams, suitable for both rain or overcoat, and guaranteed greatest value ever offered by us or any other house. For Free Cloth Samples of Men's Mackintoshes up to \$5.00, and Made-to-Measure Suits and Overcoats at from \$5.00 to \$10.00, write for Free Book No. 50C. Address,

SEARS, ROEBUCK & CO., CHICAGO, ILL.

Vapo-Cresolene
Cures While You Sleep,
Whooping Cough, Croup, Asthma, Catarrh & Colds.
Hundreds of thousands, all over the world, use Cresolene—DO YOU? Whooping Cough and Croup never result fatally when it is used. Asthma and Catarrh sufferers get immediate relief. Sold by all druggists. Write for free booklet giving doctors' testimonials and prices.
The Vapo-Cresolene Co., 68 Wall St., N. Y.
Schleffelin & Co., N. Y., U. S. Agents.

LADIES. If you have superfluous HAIR ON THE FACE
Send for new information how to remove it easily and effectually without chemicals or instruments. Correspondence confidential in plain sealed envelope.
Mrs. M. N. PERRY, Care, Box 93, Oak Park, Ill.

RUPTURE Sure Cure at home; at a small cost. No operation, pain, danger or detention from work. No return of Rupture or further use for Trusses. A complete, radical cure to all (old or young). Easy to use; thousands cured; book free (sealed). DR. W. S. RICE, Box F, Adams, New York.

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In working for me. Ladies and gentlemen, this is your great opportunity. OUT-LET HERE. Are you ready? Workers write at once to E. HANNAFORD, Springfield, Ohio.
OPIUM and Liquor Habit cured in 10 to 20 days. No pay till cured. Dr. J. L. Stephens, Dept. L, Lebanon, Ohio.

PILES Instant relief; final cure in a few days. Never returns; no purge; no salve; no suppository. Remedy mailed free. Address C. J. MASON, Box 519, NEW YORK, N. Y.

PLAYS Dialogues, Speakers for School, Club and Parlor. Catalogue free. T. S. DENISON, Publisher, Chicago, Ill.

HOW COLONEL CODY BECAME "BUFFALO BILL"

Perhaps no man is so much of a hero in the eyes of the American boy as Colonel William F. Cody, or "Buffalo Bill," as he is better known. Reports of his recent illness have again directed the attention of the world to this intrepid scout and Indian-fighter.

"Buffalo Bill" is just about to celebrate his fifty-fourth birthday. He was born in Iowa, but in 1852, when young Cody was but seven years old, his father removed to Kansas. A few years later his father was killed in the "Border War." When the "Pony Express" was established, Cody became one of its most daring riders. At the outbreak of the Civil War he enlisted in the Seventh Kansas Cavalry, and acted as government scout and guide.

He won his title of "Buffalo Bill" in a most natural manner. In 1867 he contracted with the Kansas Pacific railroad, at \$500 per month, to furnish all the buffalo meat required for its army of workmen. In eighteen months he had actually killed 4,280 buffaloes, and fairly won his sobriquet.

When the Russian Grand Duke Alexis visited this country he went on a big buffalo-hunt on the plains, and "Buffalo Bill" acted as master of ceremonies. The hunt was a great success, and Cody was urged by the New-Yorkers in the party to visit them.

Cody had always lived on the plains, and a visit to the great city was distasteful to him, but the story runs that, when he concluded to go, his wife set to work to make him a suit of clothes for the journey. In New York he was given a hearty reception, but soon returned home.—Saturday Evening Post.

FRANKLIN'S FAMOUS TOAST

Franklin was dining with a small party of distinguished gentlemen, when one of them said, "Here are three nationalities represented; I am French, and my friend here is English, and Mr. Franklin is an American. Let each one propose a toast."

It was agreed to, and the Englishman's turn came first. He arose, and in a tone of a Briton bold said, "Here's to Great Britain, the sun that gives light to all nations of the earth."

The Frenchman was rather taken back at this, but he proposed, "Here's to France, the moon whose magic rays move the tides of the world."

Franklin then rose, and with quaint modesty said, "Here's to our beloved George Washington, the Joshua of America, who commanded the sun and moon to stand still—and they obeyed."—Philadelphia Evening Post.

GOOD MANNERS

Courtesy and consideration for others are demanded of a gentleman under all circumstances, and especially in trying situations. Good manners show themselves in respect for women in work and deed; in many regard for the feelings of equals; in prompt and cheerful submission to disappointment, and in honor, kindness, firmness and justice toward the helpless. Vigorous health, great physical strength and the excitement of competition frequently render men brusque, uncivil and even boisterous in their manners. The true athlete, however, will never lose sight of the necessity for unshaken good temper and perfect urbanity and gentleness of manner, no matter how great the heat of the strife or the magnitude of the provocation. It is in the critical moment that the chance is given him to show whether he is a brute or a gentleman.—Normal Instructor.

THE "PETIT BLEU"

Many persons have but a vague idea of the nature of the "petit bleu," which crops up so frequently in the Picquart branch of the Dreyfus case. It is really a form of correspondence-card, which can be sent by means of pneumatic tubes from one end of Paris to another, covering the distance in the comparatively short space of an hour. It has something of the expedition of a telegram, with the advantage of being much cheaper. There is the open "petit bleu," which costs threepence, double that amount securing a prepaid reply. The closed card is sold at fivepence, or reply paid one franc. This form of communication is becoming popular in Paris, the "petit bleu" being accepted at all telegraph-offices.—The London Globe.

A hitherto unfamiliar remark of Abraham Lincoln is this one, which Senator Palmer, of Illinois, says Lincoln made to him: "I have simply tried to do my duty every day, hoping that when to-morrow came I would be equal to it."

THE TRUE STORY

OF THE CONFIDING WOMAN, THE CYNICAL MAN AND THE BEARDED LADY

The scene is a comfortable sitting room. Mr. Lovegood is buried in a book and his wife is scanning the advertisements in the evening paper. Suddenly Mrs. Lovegood says "Say! dear" in a voice that made Mr. Lovegood almost drop his book. "Well, what is it?" he says, with a laugh. "Another real genuine bargain offer?" "I don't know that you'd call it that," his wife replied. "But, yes, you might," she continued, "for it is a bargain offer of free medical advice." "Let's hear all about it, my dear," said her husband. "But you know I'm a little dubious about your bargains. Your 'swans' so often turn out to be geese." "Well, then, it's an offer by a woman (physician) to give free medical advice by letter, and it says it's better to write to a woman because a man



can't understand a woman, just because he's a man, and it says too that it's just revolting to go to a man physician anyhow." And Mrs. Lovegood stopped because she was out of breath.

"I bet you," said her husband, "that the advertisement don't say she's a woman physician." "Why, yes it does," said his wife, as she looked at the advertisement again. "Well, no, I guess it don't say she's a physician, but it means the same thing, for it says that 'it is a woman whose experience in treating women's diseases is greater than that of any living physician, male or female.'" Mr. Lovegood chuckled and said, "That's what I love about you, my dear. You are so ready to believe without a question when there's a bargain in view. If you were a little fish, I'd catch you with a rubber worm every time if I put a bargain sign above the hook."

"Oh! do be serious for once," cried Mrs. Lovegood. "Then, to be serious," he replied, "this woman doesn't claim to be a physician. She would claim to be a physician if she could, because she is trying to convey the impression in every other way than by a direct claim that she is a physician. She is not, therefore, a physician and can never have practised medicine. Yet, not being a physician and never having practised medicine, she claims to have had 'experience in treating women's diseases, greater than any living physician.' Now the question is, since she never practised medicine, where did she get that experience?"

"Well, that is so," Mrs. Lovegood somewhat reluctantly admitted, "but then she is a woman." "I'm not so sure about that even," said her husband. "It looks to me as if some man was 'working' the women with the 'bearded lady' act."

"But suppose it is a woman, there's your dressmaker, who is also a woman, not to speak of Mrs. Flannigan, the cook's mother, who is a really excellent woman. If a woman's not a doctor, then one woman's as good as another and it's foolish going to a stranger hundreds of miles distant for the sympathy which friends at home can better supply. And as for a man not understanding woman's diseases because he's a man, that is the cheapest sort of clap-trap. Who have done the doctoring in the past two thousand years? The men. Where must the modern woman physician go for her knowledge? To schools taught by men and books written by men. If this woman, who claims men don't understand woman's diseases, should ever take to the study of medicine she'd have to be taught everything she knew by the men who don't know anything according to her opinion. The problem is, how a man who don't know anything about

woman's diseases can teach a woman to know everything about them. I give it up." "Then you wouldn't write," said Mrs. Lovegood, doubtfully.

"Write? What for?" said her husband. "Write to a woman? What's the use of writing to a woman? If you want to write, write to a doctor. The first question in sickness is not a question of sex, but a question of medical ability and qualifications. There's no sex in medicine, anyhow. If you want to write, why not write to a man of medical standing, a specialist like Dr. R. V. Pierce, of Buffalo, N. Y.? You know he's a regularly graduated doctor. You know he's a good one and at the head of a great medical institution. You know he's had thirty years' experience, and has, with the aid of his staff of nearly a score of skilled specialists, treated more than half a million women, who freely confided in the integrity of the man and the skill of the physician. President Garfield once said of Dr. Pierce, 'he is

one of the best men in the world, and he is at the head of one of the best medical institutions in the world.' There's nothing new about this free consultation by letter, my dear, it has been a feature of Dr. Pierce's practice for years, in fact, for more than a quarter of a century. Write to him because you'll get the best advice and no string tied to it, so to speak."

MAPS FOR READY REFERENCE

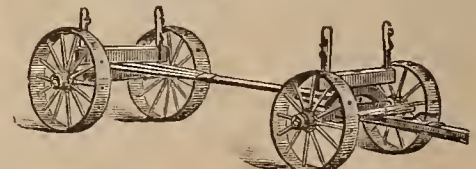
The Chicago, Milwaukee & St. Paul Railway Co. has just issued in convenient form for household, library and school reference an atlas of seven colored maps of the world, the United States and our new possessions in the Atlantic and Pacific Oceans, together with an amount of valuable information connected therewith—all up to date. This atlas will be sent free to any address on receipt of six (6) cents in postage.

Apply to Geo. H. Heafford, General Passenger Agent, Old Colony Building, Chicago, or to Robert C. Jones, Trav. Passenger Agent, Cincinnati, Ohio.

THE most costly leather in the world is known to the trade as the piano-leather. The secret of tanning this leather is known only to a family of tanners in Germany, though the skins from which it is tanned come almost entirely from America.

FARM WAGON FOR ONLY \$19.95

In order to introduce their Low Metal Wheels with Wide Tires, the Empire Manufacturing Co., Quincy, Ill., has placed upon the market a Farmer's Handy Wagon, sold at the low price of \$19.95. The wagon is only 25 inches high, fitted with 24 and 30 inch wheels with 4 inch tire.



This wagon is made of best material throughout, and really costs but a trifle more than a set of new wheels and fully guaranteed for one year. Catalogue giving a full description will be mailed upon application by the Empire Manufacturing Co., Quincy, Ill., who also will furnish metal wheels at low prices made any size and width of tire to fit any axle.

It is curious to note that wood tar is prepared just as it was in the fourth century B. C. A bank is chosen and a hole dug, into which the wood is placed, covered with turf. A fire is lighted underneath, and the tar slowly drips into the barrels placed to receive it.

BIG DROP IN DRESS GOODS

Every one can now buy Dress Goods of every description and from one yard upwards, for just as little money as the largest merchants can buy in quantities. You will receive free by mail post-paid, a book of 60 cloth samples of latest things in all kinds of Dress Goods, at 12c. to \$1.25 per yard, also full instructions how to order, etc. If you will cut this notice out and mail to the big reliable house of SEARS, ROEBUCK & CO. (Inc.), Chicago.

Does Your Head Ache?

Are your nerves weak? Can't you sleep well? Pain in your back? Lack energy? Appetite poor? Digestion bad? Boils or pimples? These are sure signs of poisoning.

From what poisons? From poisons that are always found in constipated bowels.

If the contents of the bowels are not removed from the body each day, as nature intended, these poisonous substances are sure to be absorbed into the blood, always causing suffering and frequently causing severe disease.

There is a common sense cure.

AYER'S PILLS

They daily insure an easy and natural movement of the bowels.

You will find that the use of

Ayer's Sarsaparilla

with the pills will hasten recovery. It cleanses the blood from all impurities and is a great tonic to the nerves.

Write the Doctor.

Our Medical Department has one of the most eminent physicians in the United States. Tell the doctor just how you are suffering. You will receive the best medical advice without cost. Address, DR. J. C. AYER, Lowell, Mass.

HAIR SWITCH 65 CENTS.

WE SELL HUMAN HAIR SWITCHES to match any hair at from 65c to \$3.25, the equal of switches that retail at \$2.00 to \$5.00. OUR OFFER: Cut this ad out and send to us, inclose a good sized sample of the exact shade wanted, and cut it out as near the roots as possible, inclose our special price quoted and 5 cents extra to pay postage, and we will make the switch to match your hair exact, and send to you by mail, postpaid, and if you are not perfectly satisfied, return it and we will immediately refund your money.

Our Special Offer Prices as follows: 2-oz. switch, 20-in. long, long stem, 65c; short stem, 90c; 2-oz. 22-in. long, short stem, \$1.25; 3-oz. 22-in. long, short stem, \$1.50; 3-oz. 24-in. long, short stem, \$2.25; 3 1/2-oz. 25-in. long, short stem, \$3.25. WE GUARANTEE OUR WORK the highest grade on the market. Order at once and get these special prices. Your money refunded if you are not pleased. Write for Free Catalogue of Hair Goods. Address, SEARS, ROEBUCK & CO. (Inc.) Chicago.

FAT

How to Reduce it

Mrs. L. Lanier, Martin, Tenn., writes: "I reduced my weight 2 lbs. in 15 days." Purely vegetable, and harmless as water. ANY one can make it at home at little expense. No starving. No sickness. We will mail a box of it and full particulars in a plain sealed package for 4 cents for postage, etc. HALL CHEMICAL CO. B Box St. Louis, Mo.

Trial Package Free!

If any reader, suffering from rheumatism, will write to me, I will send them free of cost a trial Package of a simple and harmless remedy which cured me and thousands of others, among them cases of over 40 years standing. This is an honest remedy that you can test before you part with your money. Address JOHN A. SMITH, 761 Summerfield Church Building, Milwaukee, Wis.

STUDY AT HOME and prepare for a good position. We teach Book-keeping, Business Forms, Penmanship, Arithmetic, Letter Writing, Commercial Law, etc. by MAIL, in a thorough, practical way, giving a successful start in life. Ten Years' Success. References from every state. Catalogue free. Trial lesson 10 cents. BRYANT & STRATTON'S COLLEGE, BY MAIL, No. 330 College Bldg., Buffalo, N. Y.

POULTRY 24 in. wide, 150 ft. long roll, \$1.14
30 " " 150 " " " 1.42
36 " " 150 " " " 1.71
48 " " 150 " " " 2.28
Other widths in proportion.
Write for Poultry Catalogue.
NETTING in SEARS, ROEBUCK & CO. (INC.) CHICAGO.

If afflicted with **SORE EYES** use **Dr. ISAAC THOMPSON'S EYE WATER**

A DECISION ON "TIPPING"

The United States government has set its foot down on the practice of "tipping." Public servants whose duty requires them to travel may "tip" waiters, porters and expressmen to their hearts' content, but it must be at their own expense. The treasury department will not allow any item of expense for gratuities to servants, hackmen and others.

While the official condemnation of the government will not materially influence the growth and prevalence of this costly and un-American practice, it will be a source of gratification to tens of thousands of men who travel and who are forced to "tip" servants and others that the government does not propose to encourage the practice. A ruling on the subject has been promulgated by the treasury department through Acting Secretary Spaulding. In this it is held that "tips" cannot be considered legitimate charges of expense against the government.

The last ten years have witnessed the growth of the "tipping" custom to a degree where it now embraces practically the entire country. Formerly it was confined to ocean-steamers and to a few hotels in New York patronized exclusively by Anglo-Americans. But cheap imitators of the latter and the shoddy new rich took up the custom, spread it from city to city, until to-day men and women who heartily detest the practice, not because of the money involved, are compelled to submit to it or endure discomfort and treatment often little less than insulting from impudent servants and servile lackeys. A few years ago a small gratuity was received with manifestations of thanks by servants in hotels, dining-cars and in restaurants. Now the tip is regarded as an absolute right, and in many cases is accepted without thanks or with an air of lofty condescension.

To some men a "tip" is of little consequence. To commercial men and those compelled to travel it is a constant and growing item of expense. It is the contribution of the public to the cash-box of the hotel, the restaurant-keeper and the sleeping-car company, because lower wages are paid to their servants with the expectation that the deficit will be paid up in "tips" from customers, guests and the public generally.—Philadelphia Press.

TOLD OF LITTLE WILHELMINA

An interesting story is told of the young queen Wilhelmina, which is significant as illustrating the character of the queen. It occurred when she was not more than seven years old.

Her father, the late king, was presented with a very beautiful and very choice set of cups and saucers, and so highly did he prize the gift that he solemnly impressed upon his servants and the members of his household that if the pieces were destroyed or injured in any way the unfortunate person responsible for the accident should be severely punished. It happened that some time later a footman, in carrying the dishes from the room in which he had been serving, accidentally broke one of the cups. He was horrified and filled with grief at the misfortune, which he knew would cost him his position and his home.

Happening at that moment to meet the little princess, he said to her, with sobs, "Good-by, I have got to go; I have broken one of the cups."

The little lady expressed her regret and asked why, and the footman explained to her the decree of the king. The princess became thoughtful, and finally said:

"I will help you out of this trouble, and I'll tell you what to do. You get some glue and fasten the pieces together, and tomorrow you bring the cup to me filled with tea, but be sure it is cold tea, and I will see what I can do about it."

The footman, much relieved, obeyed the little princess, and the following evening the footman handed her the cup of cold tea. In a moment she managed to let it fall. The cup of course broke into a thousand pieces. The king was furiously angry. Little Wilhelmina ran to him, and throwing her arms around his neck, said, "Good-by, father, I am going."

"What do you mean?" asked the king. "Why, you said the first person who broke one of these cups was to be banished, so I am going."

At this the king, who worshiped his little daughter, took her in his arms and forgave her, and he never knew that the child had committed the act to save the footman.—Rochester Democrat and Chronicle.

For Croup, Whooping Cough, Catarrh—any form of "cold"—a safe and almost certain cure will be found in Jayne's Expectorant.



A person whom I know explains his pretty constant use of Ripans Tabules in this way. "When your hands are soiled," said he, "you apply water to them. If you are fatigued or travel-stained, a bath is efficient and pleasant in its restorative and freshening effect. Yet your hands will get dirty again; and on occasion you will once more be soiled by perspiration, and require water and soap. Now Ripans Tabules are to the inner man about what soap and water are to the outward. They refresh and sweeten, and will do so again and again, as often as occasion requires, which will be every now and then with all people who are hurried about meals, or who fail to masticate their food properly or are compelled to subsist on food that is improperly cooked or prepared. The people of this sort include about seven-eighths of every civilized community."

A new style packet containing TEN RIPANS TABULES in a paper carton (without glass) is now for sale at some drug stores—for five cents. This low-priced sort is intended for the poor and the economical. One dozen of the five-cent cartons (120 tabules) can be had by mail by sending forty-eight cents to the RIPANS CHEMICAL COMPANY, No. 10 Spruce Street, New York—or a single carton (TEN TABULES) will be sent for five cents.

LOCAL OR TRAVELING AGENTS WANTED FOR THE NEW UNIVERSAL DICTIONARY

Scores of thousands of copies already sold. Represents the LIVING LANGUAGE OF THE ENGLISH-SPEAKING WORLD, its plan including the features of a first-class, easily consulted, reliable dictionary for every-day use, with some points of striking superiority. It has been accepted as the BEST WORKING DICTIONARY in the language, and in the opinion of thousands it is the coming dictionary for the Anglo-American people. Contains over 600 pages, size 8 1/4 by 6 inches.

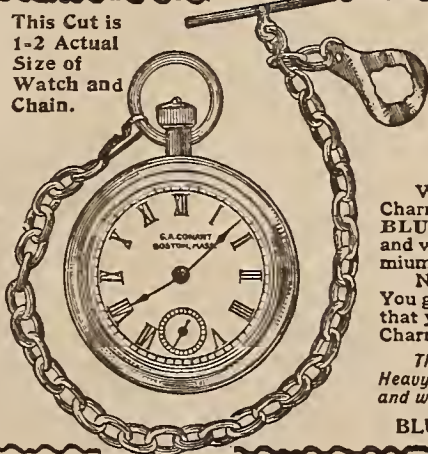
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Watch and Chain FOR ONE DAY'S WORK.

We send this Nickel-Plated Watch, also a Chain and Charm to Boys and Girls for selling 1 1/2 dozen packages of BLUINE at 10c. each. Send your full address by return mail and we will forward the Blaine, postpaid, and a large Premium List.

No money required. We send the Blaine at our own risk. You go among your neighbors and sell it. Send us the money that you get for it and we send you the Watch, Chain and Charm, prepaid.

This is an American Watch, Nickel-Plated Case, Open Face, Heavy Bevelled Crystal. It is Guaranteed to keep Accurate Time, and with proper care should last Ten Years.

BLUINE CO., Box 392 CONCORD JUNCTION, MASS.

LET US START YOU—\$125 A MONTH SURE

GOLD, SILVER, NICKEL AND METAL PLATING—NEW QUICK PROCESS

MR. REED MADE \$\$\$ FIRST 3 DAYS. Mr. Cox writes: "Get all I can do. Plate 30 sets a day. Elegant business." Mr. Woodward earns \$170 a month. Agents all making money. So can you. Gents or Ladies, you can positively make \$5 to \$15 a day, at home or traveling, taking orders, using and selling Prof. Gray's Plating. Unequaled for plating watches, jewelry, tableware, bicycles, all metal goods. Heavy plate. Warranted. No experience necessary. LET US START YOU IN BUSINESS. We do plating ourselves. Have experience. Manufacture the only practical outfit, including all tools, lathe and materials. All sizes complete. Ready for work when received. Guaranteed. New modern methods.

WE TEACH YOU the art, furnish recipes, formulas and trade secrets FREE. Failure impossible. THE ROYAL OR NEW DIPPING PROCESS. Quick. Easy. Latest method. Goods dipped in melted metal, taken out instantly with finest, most brilliant plate, ready to deliver. Thick plate every time. Guaranteed 5 to 10 years. A boy plates from 200 to 300 pieces tableware daily. No polishing, grinding or work necessary.

DEMAND FOR PLATING IS ENORMOUS. Every family, hotel and restaurant have goods plated instead of buying new. It's cheaper and better. You will not need to canvass. Our agents have all the work they can do. People bring it. You can hire boys cheap to do your plating, the same as we, and solicitors to gather work for a small per cent. Replating is honest and legitimate. Customers always delighted. WE ARE AN OLD ESTABLISHED FIRM. Been in business for years. Know what is required. Our customers have the benefit of our experience.

WE ARE RESPONSIBLE and Guarantee Everything. Reader, here is a chance of a lifetime to go in business for yourself. WE START YOU. Now is the time to make money. WRITE TO-DAY. Our New Plan, Samples, Testimonials and Circulars FREE. Don't wait. Send us your address anyway. Address F. T. GRAY & CO. PLATING WORKS, 505 ELM STREET, CINCINNATI, OHIO.

SILK REMNANTS FOR CRAZY WORK.

A big package of beautiful Silk Remnants, from 120 to 150 pieces, all carefully trimmed, prepared from a large accumulation of silks especially adapted for all kinds of fancy work. We give more than double any other offer, and the remnants are all large sizes, in most beautiful colors and designs. With each assortment is four skeins of the very best embroidery silk, assorted colors. Send 25 cents in silver or stamps to Paris Silk Agency, Box 3045, N. Y. City, N. Y.



OUR \$1.20 BUGGY DASH

SEND \$1.20, state width and height of dash wanted and we will send you a AA Grade Patent Leather Dash to fit your buggy complete with feet and bolts, all irons and adjustable extension ready to put on. Write for Free Buggy and Buggy Material Catalogue. Address SEARS, ROEBUCK & CO. (INC.) CHICAGO, ILL.

PILES

Absolutely cured. Never to return. A Boon to Sufferers. Acts like Magic. Trial box MAILED FREE. Address, Dr. E. M. BOTOT, Augusta, Maine.

Here is a snap; nothing to carry; \$5 daily guaranteed; Automatic Halter Rope. 70,000 Sold. E. T. KENNEDY, Box 70, Jersey City, N. J.

HORSES

"You hear that boy laughing?—you think he's all fun;
But the angels laugh, too, at the good he has done;
The children laugh loud as they troop to his call,
And the poor man that knows him laughs loudest of all."

SMASHED HIS "SPECS"

COLONEL ROOSEVELT is very near-sighted," said one of the New Orleans boys who saw service at Santiago, "and when the hot fighting was in progress his luggage consisted almost entirely of spectacles. Near-sighted people always have an abiding dread of losing their glasses, knowing their absolute helplessness without such aid, and I was told by one of the New York club contingent that Roosevelt took particular pains before leaving home to provide against such a disaster.

"He had been in the habit of wearing nose-glasses, with a black silk cord attached, but the arrangement was entirely unsuited to a campaign where the glasses themselves would be liable to fall off constantly and the cord to catch on twigs. So he substituted very large, round spectacles, with steel hooks for the ears, and had a dozen pairs mounted. These he planted around his person and equipment, trying to distribute them so no one accident could include them all. One pair was sewed in his blouse, another in his belt, another in his hat, two in his saddle-bags and so on.

"At the fight at Guasimas his horse was harked by a bullet, while held by an orderly, and plunged frantically against a tree. Colonel Roosevelt came rushing up, all anxiety, and began prying under the saddle-flap.

"They haven't hurt the nag, sir," said the orderly.

"I know," replied the colonel, with tears in his voice, "but, blast 'em, they've smashed my specs!"

—New Orleans Times-Democrat.

THE ART OF CRYING

"Very few women know how to cry properly," said a cold-blooded observer, "but if they realized how potent tears are as a weapon they would spare no pains in learning to shed them gracefully. As a rule, brunettes cry much better than blondes. I call to mind, for instance, a very pretty little lady who was a litigant in court some years ago, and who wept when a certain portion of the testimony was reached. As the critical moment approached her eyes began to swim. They seemed to grow larger and darker, and they took on a wistful and appealing look that made every man in the jury-box feel as if he wanted to climb right out and hit the plaintiff with a club. Her lips were quivering, and presently two great tears rolled softly down her cheeks. That settled it. I was foreman of the jury, and we were exactly a minute and a half in giving her a verdict. Now, if that had happened to some other woman, equally worthy, but of a lighter complexion, the chances are her nose would have turned pink and her eyes would have assumed a slightly inflamed appearance that would have been very damaging to her cause. If she had sniffed, as they usually do, I can't say what the result might have been. A woman who can cry artistically can have anything she wants. I'm surprised it isn't taught, like dalsarte movements."—New Orleans Times-Democrat.

WHAT EVERYBODY SAID

The clergyman—Until death do ye part.
The bridegroom—At last; oh, my darling.
The bride—Don't, Bert, there's a dear, you'll rumple my hair.
The father—It's twenty-five years since I was fixed up, Bert, my boy, and I trust you'll—well, of course, the rough goes with the smooth.
The mother—Oh, my darling: it's so hard to part with you, and he sure don't get a seat facing the engine.
The best man—And I—er—er I—er hope—er—er I thank you all on behalf of the ladies.
The oldest friend—I've known her since she was in short dresses—oh, you needn't blush, my dear, you had very pretty—
Mary—And I wish yer all happiness, miss.
John—As I'm sure, Miss and Mr. 'Erbert, we all does.
One of the crowd—She ain't a patch on my Susan.
Another of the crowd—Don't 'e look cross? I bet she'll 'ave a nice temper to put up with.
The coachman—Any more luggage, miss—beg pardon—ma'am.
The guard—I'll lock it, sir, and see as no one gets in—thank ye, sir.
And they were off.—Tit-Bits.

VARIABLE

Stranger (in Texas)—"How long do you fellows work at a stretch?"
Cowboy—"Well, it depends a good deal on how easy de feller dies. Dey're variable."—Judge.

SUFFICIENT UNTO THE DAY

"But," said the superintendent of construction, "how are we, in building this pyramid, to get such enormous masses of stone up to such a height with our somewhat primitive appliances?"
"What difference does that make?" replied the immortal Cleopas. "Go ahead and do the job, and let future historians invent a method for us."—Puck.

FAMILIARITY

Living in Hawaii is not without its disadvantages. The natives have little idea of respectful deference, and insist on calling their employers by their Christian names.

One lady who upon her arrival was at once addressed as Jennie by the men-servants contemplated with her sister for allowing them to become thus familiar. She was assured that every effort had been made to induce them to say Mister and Mistress, but this they steadily refused to do.

"No! no!" they said. "Too many Smiths, too much Jones—you John and Lizzie."

One Englishwoman was determined that her servants should never address her in the familiar fashion that other white people had allowed to become common. She therefore instructed her husband never to mention her name in their hearing.

One day this lady had some visitors, and to their great delectation the cook put his head inside the door and asked, sweetly:

"My love, what vegetables do you want to-day?"
After that the Englishwoman was content to be called simply Mary.

AS WITH ONE VOICE THEY SPOKE UP

At a little up-town gathering not long ago the guests played some simple games and told ghost-stories, and managed to have a good time in the old-fashioned way.

Pretty soon one of the gentlemen said:
"I don't believe we appreciate what a steady old slow coach the human brain is. Notwithstanding all our talk about quick wits, and flashes of intelligence, the brain is not so easily thrown from its accustomed ruts. If, for instance, I ask a question which is entirely new to you, but which your honest old brain mistakes for a query quite similar in construction, it will go right ahead and telegraph the reply in its own hide-bound way."

"That sounds interesting," said one of the guests, "but show us an example."

"I will," said the first speaker, "with the proviso that you answer it promptly." He smiled, and then, without any haste, quietly asked, "Who saved the life of Pocahontas?"

"John Smith!" roared twenty voices.

"You see," said the questioner.—Cleveland Plain Dealer.

DID HE BELIEVE?

A skeptical young man confronted an old Quaker with the statement that he did not believe in the Bible. The Quaker said:

"Dost thou not believe in France?"

"Yes; though I have not seen it, I have seen others that have: besides, there is plenty of corroborative proof that such a country does exist."

"Then thee will not believe anything thee or others have not seen?"

"No; to be sure I won't."

"Did thee ever see thine own brains?"

"No."

"Ever see anybody that did?"

"No."

"Does thee believe thee has any?"

The young man left.

DIDN'T OPEN THAT WAY

A lawyer, who worthily bears a distinguished name, occupies an old-fashioned mansion on the edge of the city. Recently one of his sisters tipped into his room after midnight, and told him she thought burglars were in the house. The lawyer put on his dressing-gown and went downstairs. In the back hall he found a rough-looking man trying to open a door that led into the back yard. The burglar had unlocked the door, and was pulling at it with all his might. The lawyer, seeing the robber's predicament, called to him, "It does not open that way, you idiot; it slides back."

THE GOOD OF CHEST-PROTECTORS

Mr. Simpkins is an enthusiast on "chest-protectors," which he recommends to the people on every occasion.

"A great thing!" he says. "They make people more healthy, increase their strength and lengthen their lives."

"But what about our ancestors?" some one asked. "They didn't have any chest-protectors, did they?"

"They did not," said Mr. Simpkins, triumphantly. "And where are they now? All dead!"

TWO OF A KIND

Bildad Jones—"Father, kin I go down cellar an' get some apples ter eat?"

Farmer Jones—"Yes, Bildad; but see ye sort 'em over first, an' don't pick out none but the had ones."

Bildad—"But s'pose thar ain't none bad ones, dad?"

Farmer Jones—"Then ye'll have ter wait 'till they gits had, Bildad. We can't afford ter be eatin' good sound apples thet's wuth a dollar a bushel."

Little Sandy—"Feyther, what is an octogenarian?"

McLubberty—"An octogenarian, me b'y, is a mon thot has eight toes on aich fut."

M. M. S. POULTRY FENCING

is thoroughly interwoven but has long horizontal wires, which classes it as

A FENCE, NOT A NETTING.

Like a fence, it can be properly stretched and erected with few posts and without top and bottom rails. Has cable selvage and a cable running through the fence every foot. Each roll contains the famous M. M. S. trade mark.

None other genuine.

We are manufacturers also of the following famous fences:

CABLED FIELD AND HOG FENCE

with or without lower cable barbed. All horizontal lines are cables.

STEEL WEB PICKET FENCE ideal fence for lawns, parks, cemeteries, etc. Steel gates, posts, etc. Everything the best of its kind.

DE KALB FENCE CO., 38 High St., DE KALB, ILL.



Pat. July 21, 1896. Pat. July 6, 1897.

SEND NO MONEY

If you live within 400 miles of Chicago, but send this adv., state if 3, 5 or 7 drawer machine is desired, and we'll send this, our improved high-arm Elveon Machine, by freight, C.O.D. and allow you to examine it carefully before you pay one cent. If you find it just as represented, an unparalleled bargain and the handsomest machine you ever saw, then pay the agent your special price and freight charges, take it home, use it 80 days, and if unsatisfied in any respect, return it to us and we'll instantly refund your money. If you live over 400 miles from Chicago, send \$1.00 deposit and we'll ship on above conditions.

THIS OUR IMPROVED ELVEON is built by expert sewing machine mechanics, possesses the good points and improvements of all high-grade machines with no defects, and is adapted to sew the lightest or heaviest cloths. A binding 20-year guarantee sent with each machine. Made with highly polished solid oak cabinet, beautiful gothic cover, rests

on four casters, adjustable ball-bearing treadle, artistic iron stand, positive fore-motion drop feed, highly nicked drawer pulls, the best high-arm head made, latest nickel bar, adjustable presser-foot, self-threading perfect tension shuttle, adjustable bearings, nearly noiseless shuttle carrier, latest improved tension liberator, and loose wheel, new patent automatic bobbin winder, patent dress guard. Our free instruction book tells how to do any known kind of plain and fancy work. Machines from \$8.50 up are fully described in our Big Free Sewing Machine Catalogue. Write for it today. THE LOUIS Z. VEHON CO. 155 W. Jackson St. Chicago, Ill.

30 DAYS' FREE TRIAL

THE MIDDLEMAN'S MONEY

makes the fence no better. Then why pay him a lot of extra money? Why not save that amount by buying from us at wholesale prices? We do not impair the quality to make our fence cheap. In fact, we depend upon the quality to hold our trade. We could not sell the

Advance Fence

as cheaply as we do if we had to sell it through the dealer. When you buy from us you only pay one profit, when you buy from the dealer you pay two profits. Send postal card for circulars and prices.

THE ADVANCE FENCE CO., 3102 OLD ST., PEORIA, ILL.

ACME PULVERIZING HARROW

CLOD CRUSHER AND LEVELER.

For all soils and all work. Crushes, cuts, lifts, pulverizes, turns and levels. Cast steel and wrought iron—practically indestructible. Cheapest riding harrow and best pulverizer on earth. Sizes 3 to 13½ feet.

SENT ON TRIAL To be returned at my expense if not entirely satisfactory.

I deliver free on board at New York, Chicago, Columbus, Minneapolis, Louisville, San Francisco and other points. Catalogue mailed free. Address **DUANE H. NASH, Sole Mfr., Millington, N. J., or Chicago, Ill.**

Don't Pay Three Profits

If you are going to pay for a carriage why not pay the least you can for the best vehicle? Get all you can in material and workmanship—pay as little as you can for handling and "extras."

You save the jobber's commission and the retailer's profit when you buy direct from the factory. You pay the cost of making with one moderate profit added. We are not agents, but manufacturers of buggies, carriages, surreys, phaetons, wagons, harness and horse accessories. Everything guaranteed. With our illustrated catalogue you can order easily and safely. If what you order does not suit, send it back and we will pay the freight both ways. First, get the catalogue. You are welcome to a copy.

THE COLUMBUS CARRIAGE & HARNESS COMPANY, COLUMBUS, O.

\$7.45 BUYS A REGULAR \$15 FEED CUTTER.

SEND US \$1.00

and we will send you this Feed Cutter by freight, C. O. D., subject to examination. You can examine it at your freight depot, and if found perfectly satisfactory and the greatest value you ever saw or heard of, pay the freight agent the balance, \$6.45 and freight charges.

This is the Celebrated Salem Cutter

for cutting hay, straw or fodder; frame heavy solid seasoned hardwood; well finished, 1½ inch genuine Eager silver steel knife, made with improved adjustments to cut ½, 1, 1½ or 2 inches, malleable hopper, extra heavy balance wheel, perfect adjustment, lightest running, largest capacity and most durable 165-pound center ever made. Write for Free Agricultural Implement Catalogue. Address,

SEARS, ROEBUCK & CO. (Inc.), Chicago, Ill.

FARMERS AND MECHANICS.

Vise, Anvil, Drill, Hardy, Tool Grinder, Last, Pipe Vise, Sewing Clamp.

Satisfaction guaranteed. Sells at sight. Big inducements to agents.

Address with stamp

BLOOMFIELD MFG. CO., Bloomfield, Indiana.

RUBBER STAMPS.

We make them CHEAPER than anyone. Send for Catalogue FREE

Goods are delivered prepaid. Work guaranteed. Reference, Home

National Bank. **HOWARD & COMPANY, Brockton, Mass.**

LADIES I Make Big Wages

At Home and want all to have the same on

portunity. It's VERY PLEASANT

work and will easily pay \$18 weekly. This is no deception. I

want no money and will gladly send full particulars to all

sending 2c stamp. Mrs. A. H. Wiggins, Box 49, Lawrence, Mich.

PNEUMONINE is a specific cure for pneumonia as

much as quinine is for malaria. The many recent deaths from pneu-

monia prompt this—the first ad-

vertisement ever published of it, though I have used it for fifty years.

Veritable, absolutely non-poisonous. Sold only in mail at one dollar a bottle.

L. HUSSEY A.M., M.D., CINCINNATI, OHIO.

THE YANKEE FIRE-KINDLER Burns 100 Pews

with 3c of fuel. No kindlings. War-

ranted 3 years. Greatest Seller for Agents everywhere. Sample

with terms prepaid, 15c. **YANKEE KINDLER CO., OLNEY, ILL., 57 Sta. O.**

WRITERS WANTED to do copy at home. Law College, Lima, O.

RAW FURS I pay highest prices. Send for list. J. C. DILLIS, West Philadelphia, Pa.

CARDS Send 2c stamp for Sample Book of all the

FINEST & LATEST Styles in Beveled Edge,

Hidden Name, Silk Prints, Envelopes and

Calligraph Cards for 1899. VFS. GENUINE CARDS, NOT

TRASH. **ERIKON CARD CO., 414 Columbus, Ohio.**

Dr. Isaac Thompson's Eye Water

Is afflicted with SORE EYES

THE ROCKER WASHER I DO THE WASHING WHILE YOU SIT DOWN AND ROCK ME

WARRANTED to do the family washing 100 pieces in 1 hour. No need for washboard; no wear on clothing. Write for special prices and description. **ROCKER WASHER CO., Clinton St., Ft. Wayne, Ind.**

Liberal inducements to live agents.

Best Hickory WAGON YOKES, SINGLETREES AND EVENERS. FULL SIZES, finished and ironed complete with best Norway wrought iron, at prices named under each cut; assorted dozen at regular dozen price.

ORDER 12 ASSORTED at dozen price, 12 assorted will weigh about 100 lbs., freight will be cheaper than single trees, about 60 cents for each 500 miles. You will save \$2.00 to \$5.00. Money back once if you are not pleased. Write for Catalogue of Wagon Material.

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SEND 2c stamp for Sample Book of all the FINEST & LATEST Styles in Beveled Edge, Hidden Name, Silk Prints, Envelopes and Calligraph Cards for 1899. VFS. GENUINE CARDS, NOT TRASH. ERIKON CARD CO., 414 Columbus, Ohio.

Dr. Isaac Thompson's Eye Water

Is afflicted with SORE EYES



GLEANINGS

EXIT AMERICA'S LAST CAMEL

THE last wild camel in America was killed and eaten by the Indians in Yuma a few days ago. The venerable beast was one of the herd of camels brought from Asia Minor many years ago to carry ore from the Comstock mines.

So ends the greatest attempt at acclimating foreign animals ever made in the United States. It seems sad that the noble beast, the last of his tribe, should have such an inglorious end. And yet some sympathy must be given the poor Indians, for they must have been awfully hungry to be able to masticate seventy-five-year-old camel.

Besides, the poor camel would most likely have died of slow starvation in a short time, for when last seen alive by white men it was feeble.

It was in the old days, when the Comstock was in its glory, the days before the railroad, when Virginia City was almost as important a town as San Francisco. It so happened that a certain group of mines about twenty-five or thirty miles out of Virginia City was panning out piles of rich ore. It was impossible to put up a mill close to the mines on account of lack of water.

It must be understood that as dry, rocky and barren a desert as there is on the face of the earth lay between Virginia City and the mines. To use a vehicle of any kind was out of the question, and so the ore was carried in bags slung over the backs of the animals.

From the first it was apparent that the mule plan was not a success. In the summer it took about two mules to carry water for the one that carried ore. And all the while the animals kept dying. But the ore had to be carried to the mill, for there was "millions in it."

At this juncture some genius suggested that the miners buy camels for the work. So the camels were bought at great expense.

From the first the camels did all that was expected of them. Each morning they would eat a meager breakfast of any old weed that happened in their way, drink a few gallons of water, and were ready for business. Two bags of ore, each containing between two hundred and three hundred pounds, were strapped to the back over the hump of each camel.

When the train was ready all started off at once, striking a good swinging gait that was kept up until the mill was reached. The drivers had nothing to do but follow the train. No stopping for water, no urging, no beatings. The faithful beasts did their work willingly.—Denver Republican.

HIS TERRIBLE VENGEANCE

"I'll be even with you!" he exclaimed.

Thus spake the bitterly chagrined and disappointed youth.

"You have rejected me with scorn!" he howled.

"I thought," replied the young woman, "I had been successful in concealing the scorn."

"Never mind! I'll be even with you!"

And he fled.

What did he do? you ask.

Ah, his was no ordinary revenge.

He was the editor and proprietor of the Swallowville "Palladium."

He had a photograph of the young woman.

He sent it to Chicago and had a cut made from it.

And the next week he inserted the cut in the advertising columns of the "Palladium" as the portrait of Mrs. Lydia E. Pinkham.

CLOSE GUESS

"How do you know that the young couple opposite are married?" asked the man with large business interests of his wife, as they sat in the cafe after the theater. "You can't tell anything about it."

"Oh, I can't? She wanted lobster, and he ordered a couple of ham sandwiches. They are married all right enough."—Detroit Free Press.

WAS ALSO A MIND-READER

Magistrate—"What did you pound him for, after you had held him up and robbed him?"

Captured footpad—"I knowed whut he wuz sayin' to himself about me, y'r honor, an' I wanted to show 'im that I resented it."

Little Clarence—"Pa, what do people feather their nests with?"

Mr. Calipers—"Cash down is the best thing I know of."



\$100.00 in Cash

FOR BEST FEEDING DIRECTIONS
FOR

Wilbur's Stock Food

This is the season (January, February, March) to feed WILBUR'S STOCK FOOD. It is the only true substitute for pasture for horses, cattle or hogs that are out of condition, troubled with worms, low-spirited and need toning up. But the more scientifically fed, the better the results. In order to give our customers the result of the best experience of other feeders we make the following offer:

HOW TO PROCEED

Buy a 50c. package of the Food at your feed store, harness shop, grocery or drug store and he will furnish you necessary blanks and particulars. If he does not keep the goods in stock send 50c. to us for sample package and particulars.

Feed for 30 days and then write to us condition of animal before feeding, how much you fed each day, what kind of grain you mixed with food, etc., etc. For the 25 letters embodying the best reported results and best directions for feeding we will give the prizes named below.

1st PRIZE—\$25.00 IN CASH.
2d PRIZE—\$15.00 IN CASH.
3d PRIZE—\$10.00 IN CASH.
4th PRIZE—\$6.00 IN CASH.
5th PRIZE—\$4.00 IN CASH.
6th to 25th—\$2.00 IN CASH EACH.
Total—\$100.00.

Feeding must begin on or before Feb. 25th, continue 30 days, and all letters must be in our hands by April 1st. Prizes will be awarded April 10th, and the result of the contest printed in this paper.

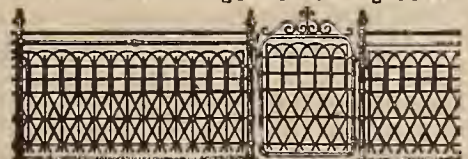
WILBUR STOCK FOOD COMPANY, Milwaukee, Wis.



19c PER ROD

Is all FOR the best Coil Spring FENCE 4 feet it costs Wire to make a FENCE high if made on our Steel King Automatic Machine.

MACHINE SHIPPED ON 6 DAY'S TRIAL, if not satisfactory ship it back. We sell all kinds of Fence Supplies direct to the farmer at wholesale prices. Twenty different designs of Ornamental fences; special prices for Cemeteries and Churches. Write us before building fence. Catalogue free.



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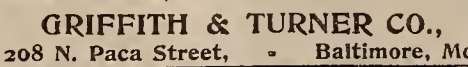
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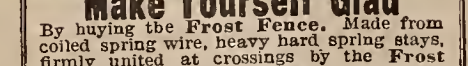
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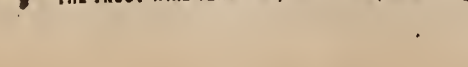
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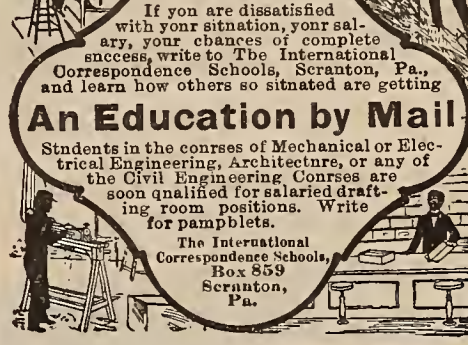
ONLY \$2.05

FOR THIS 240-POUND PLATFORM SCALE, weighs 1/2 ounce to 240 pounds, has finest STEEL BEARINGS, HEAVY TIN SCOOP, HEAVY BRASS BEAM. NO BETTER SCALES MADE, retails at \$5.00 and upwards. Weighs boxed, 48 pounds.

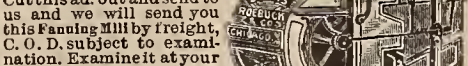
SEND US \$2.05 we will send you the scales catalogue, and if you are not more than pleased we will return your \$2.05.

Write for Free Scales Catalogue. \$1.00 family scales, to \$44.00 wagon scales.

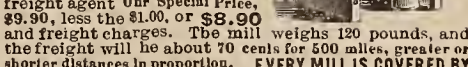
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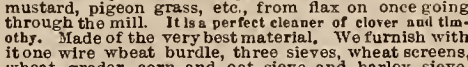
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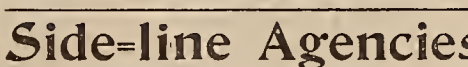
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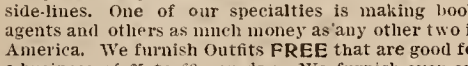
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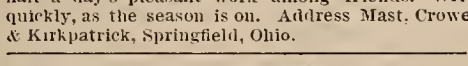
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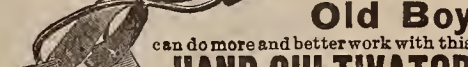
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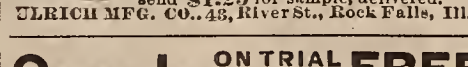
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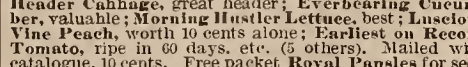
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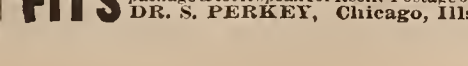
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COIN'S CHECKERED CAREER

"If an old coin could only talk, what strange adventures it might tell," remarked a Canal street druggist, twirling a silver piece he had just received from a customer. "Now, this half dollar was coined in 1848, the year the great gold craze began in California, and I should say by its looks that it has been in pretty constant circulation ever since. Think what a volume of trade that represents! If it purchased its face value only once a day, which is certainly a modest estimate, it has done well onto \$10,000 worth of business in the half century it has been going the rounds. That's quite a record, isn't it? And I dare say that curious things have happened to it in its journeyings. It has been borrowed and stolen and lost and lent; it has been hoarded by misers and squandered by prodigals, and who knows how often it has been the last coin in the pocket of a suicide? It must have lain on gaming-tables and rattled in church-boxes and held down the eyelids of the dead. There is no telling in what far countries it has traveled, and what fantastic foreign things it may have bought. I never finger one of these old coins without a certain sense of awe, and an inclination to stop, no matter how busy I may be, and do a little day-dreaming over its history."

"All that reminds me," said a gentleman who had listened to the druggist's homily, "of a queer experiment I made years ago. I was speculating one day on the possible wanderings of coins, and just to test the matter I had a small steel punch made with my initials cut in the end. By bringing it down sharply on a coin I could leave the letters indented on the surface. Well, for a long time—over a year, in fact—I stamped every scrap of hard money I got hold of—nickels, pennies and all. I suppose at the lowest estimate I turned adrift four hundred or five hundred separate pieces bearing my sign manual, meanwhile keeping my eyes open for the return of any of the wanderers. It was in 1881 or 1882 that I began the work with the die, and in all these intervening years I have never yet received a coin bearing my stamp. Looking for the initials has become such a habit with me that I do it instinctively almost every time I receive my change. Several years ago I was cashier in a good-sized retail house here, and handled a great many fractional coins. Hundreds of them had been marked, but none had my particular stamp. This certainly shows how widely money becomes scattered. A young friend of mine tried the same experiment, and after a considerable lapse of time found one of his coins in some change given him in a store in New York. He had a ring put in the piece, and wears it on his watch-chain."—New Orleans Times-Democrat.

THE PROPER TIME

Mrs. McLubbert—"Murty, whin do a couple sillybrate dheir tin weddin'?"

McLubbert—"Hear that now! Whin dhey hov been married tin years, av coorse!" —Puck.

When the Turks entered Greece they traveled on a pass.

A smart little boy is—or was—ambitions to be a letter-carrier. A short time ago he secretly secured a bundle of old love-letters that his mother had treasured since her courtship days, and distributed them from house to house throughout the neighborhood.

Sunday-school teacher—"Why, Willie Wilson! Fighting again! Didn't last Sunday's lesson teach that when you are struck on one cheek you ought to turn the other to the striker?"

Willie—"Yes'm; but he hit me on the nose, an' I've only got one."

Mrs. Blinky—"John, dear, won't you discharge Mary? You know how afraid I am of her."

Mr. Blinky—"Certainly. No servant can ever scare me." (A little while after) "Mary—ahem! Mrs. Blinky has asked me to tell you that she wants to see you after I have gone to the office."

The editor of the "Clarion" was a very patient man. A startling crash from the direction of the composing-room caused him to push his spectacles up on his brow and cease writing. When he found that the boy had let the first-page form fall on the floor, where it lay in an incoherent mass, he shook his head reproachfully, and exclaimed:

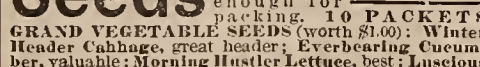
"Lemuel, I do wish that you could manage to break the news more gently."

Side-line Agencies

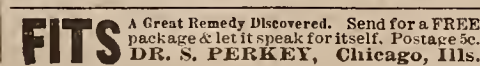
Our agencies are worked on three different plans at agent's option. They pay exceptionally well. Some are particularly suited for work at odd times, or as side-lines. One of our specialties is making book-agents and others as much money as any other two in America. We furnish Outfits FREE that are good for a business of \$5 to \$8 per day. We furnish even our costliest Outfits so that they do not take one cent from the agent's pocket—only an hour's, or at most half a day's pleasant work among friends. Write quickly, as the season is on. Address Mast. Crowell & Kirkpatrick, Springfield, Ohio.



SEARS, ROEBUCK & CO. (Inc.), Chicago, Ills.



SEARS, ROEBUCK & CO. (Inc.), Chicago, Ills.



SEARS, ROEBUCK & CO. (Inc.), Chicago, Ills.



SEARS, ROEBUCK & CO. (Inc.), Chicago, Ills.

SMILES

THE KANSAS HEN

We have read of Maud on a summer day,
Who raked, bare-footed, the new-mown hay;
We have read of the maid in the early morn,
Who milked the cow with the crumpled horn,
And we've read the lays that the poets sing
Of the rustling corn and the flowers of spring.
But of all the lays of tongue or pen
There's naught like the lay of the Kansas hen.

Long, long before Maud rakes her hay
The Kansas hen has begun to lay;
And ere the milkmaid stirs a peg
The hen is up and has dropped her egg;
The corn must rustle and the flowers spring
If they hold their own with the barn-yard ring.
If Maud is needing a hat and gown
She doesn't hustle her eggs to town.
But goes to the store and obtains her suit
With a basketful of her fresh hen-fruit:
If the milkmaid's bean makes a Sunday call
She doesn't feed him on milk at all.
But works up eggs in a custard pie
And stuffs him full of a chicken fry.
And when the old man wants a horu,
Does he take the druggist a load of corn?
Not much! He simply robs a nest.
And to town he goes—you know the rest.
He hangs around with the eliques and rings,
And talks of politics and things,
While his poor wife stays home and sews;
But is saved from want by those self-same fowls;
For, while the husband lingers there,
She watches the cackling hens with care,
And gathers eggs, and the eggs she'll hide
Till she saves enough to stem the tide.

Then hail, all hail, to the Kansas hen,
The greatest blessing of all to men!
Throw up your hands and emit a howl
For the persevering barn-yard fowl!
Corn may be king, but it's plainly seen
The Kansas hen is the Kansas queen.
—From the Kansas Board of Agriculture Report.

THE FEVER IN THE MOUNTAINS

I WAS traveling through the mountains of West Virginia last week," said a drummer to a "Star" reporter, "and, driving to a store, I opened up conversation with the merchant on politics before introducing my goods.

"What do you think about the expansion fever?" I asked.

"Wall, now, I sure am glad yo' axed me about that thing. Maybe yo' can give me some points. Do yo' all hev it in Washington?"

"Oh, yes; we have it bad," I replied, wondering what the man meant.

"Wall, we hain't got but one case. That's my wife. Thar hain't no doctor 'ceptin' a hoss-doctor hyar, an' he 'lowed it might be the dropsy. But her fut has expanded till thar ain't room for much else under the table, an' I'm pow'ful glad yo' all know sumethin' 'bout it. Expansion fever, thet's just it. Do yo' all know any cure for it?"

"When I explained what I meant he was so angry I could not have sold him gold dollars for fifty cents each."—Washington Star.

THE COMING BLACK SHEEP

The Rev. Dr. Meredith, a well-known Brooklyn clergyman, tries to cultivate friendly relations with the younger members of his flock. In a recent talk to his Sunday-school he urged the children to speak to him whenever they met.

The next day a dirty-faced urchin, having a generally disreputable appearance, accosted him in the street with, "How do, Doc?"

The clergyman stopped, and cordially inquired, "And who are you, sir?"

"I'm one of your little lambs," replied the boy, affably. "Fine day."

And tilting his hat to the back of his head, he swaggered off, leaving the worthy divine speechless with amazement.

GETTING EVEN

Among the laborers who worked upon a sewer in a certain city recently was one noted for his laziness.

On his way home one evening he entered a blacksmith-shop.

"What can I do for you, Barney?" asked the blacksmith.

"Plase to take the half off of that sphade."

The smithy did as requested, and while handing it to the owner asked:

"Do you mind telling me why that was done?"

"Sne," replied Barney. "This avenin' the boss cut me wages; and so, to git aven wid the dirty schoundrel, I had ye cut me spade in half."

ILLUSTRIOUS ORIGIN

"How slangy Tennyson's poetry is occasionally!" observed the girl in the fur jacket.

"You're prejudiced," replied the girl in the yellow buskins. "I never heard him accused of such a thing as that before."

"You didn't know, perhaps, that he originated one of the most odious slang phrases of the present day. Listen:

"Love took up the harp of life, smote on all its chords with might.

Smote the chord of self, that, trembling, passed in music—out of sight!"

—Chicago Tribune.

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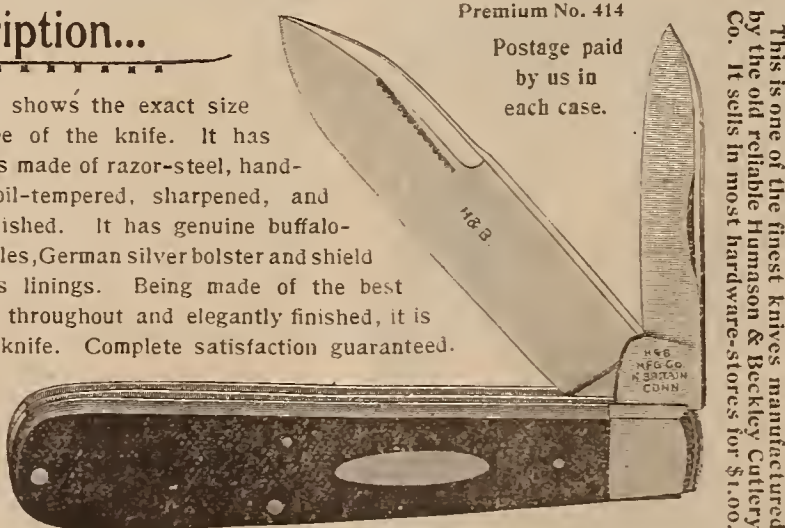
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NOW TAKES HIS HOME PAPER

A jealous editor down South tells of a man in his neighborhood who doesn't take a paper. The tale may not be a true one. This money-saving fellow got a Maine story-paper and found that by sending one dollar to a Yankee he could get a cure for drunkenness. Sure enough he did. It was to "take the pledge and keep it." Later on he sent fifty two-cent stamps to find out how to raise turnips successfully. He found out—"Just take hold of the tops and pull." Being young, he wished to marry, and sent thirty-four one-cent stamps to a Chicago firm how to make an impression. When the answer came it read, "Sit down on a pan of dough." That was a little rough, but he was a patient man, and thought he would yet succeed. The next advertisement he answered read, "How to double your money in six months." He was told to convert his money into bills, fold them, and he would see his money doubled. The next time he sent for twelve useful household articles, and got a package of needles. He was slow to learn, so he sent a dollar to find out "how to get rich"—"Work like the devil and never spend a cent." That stopped him, but his brother wrote to find out how to write a letter without pen or ink. He was told to use a lead-pencil. He paid five dollars to learn to live without work, and was told on a postal-card "to fish for suckers, as we do." He takes his home paper now, and is happy.

BIRDS ON HER HAT

That quick wit is not confined to cities was proved the other day by a young woman who was rambling along one of our roads.

She was dressed smartly, and when she met a small, hare-legged urchin carrying a bird's nest with eggs in it she did not hesitate to stop him.

"You are a wicked boy," she said. "How could you rob that nest? No doubt the poor mother is now grieving for the loss of her eggs."

"Oh, she don't care," said the boy, edging away; "she's on your hat!"—Cape Ann (Mass.) Advertiser.

THE SEAT OF THE SOUL

The facetious man ambled gingerly over the icy pave.

"These are the times that try men's soles," he called to a passing friend. He threw a heavy emphasis on the "soles," and the friend smiled.

At that moment the punster's feet flew from under him, and he came down with a resounding thwack.

"I see," said the passing friend, with much gravity, "that the exact seat of the soul is still a matter of doubt."—Cleveland Plain Dealer.

THE FORGETFULEST MEMORY

There is a little girl in Oakes who prides herself upon her knowledge of the Bible, and, above all, her wonderful memory therein. Recently the following question was put to her:

"And now, dear, can you tell me the names of the three men who were in the fiery furnace?"

"Oh, yes," was the quick reply. "Shadrack, Ahednego and—and; well, gracious, but I've got the forgetfulest memory that ever was borned."—Western Womanhood.

EXACT LOCATION UNCERTAIN

Sympathetic friend—"You've only heard from him three times since his regiment went to Cuba? Well, I wouldn't be uneasy, my dear child. If anything serious had happened to him you would have seen something about it in the newspapers. You have no reason to think he is in jeopardy, have you?"

Anxious young woman—"I don't know. How far is that from Santiago?"

LITTLE BITS

The American method is indicated by an incident in the life of Governor Brough, of Ohio. He was the war governor of that state, a man of intense energy, neat executive ability, and very economical in the use of his words. A newspaper reporter applied, through the governor's private secretary, for information in regard to the Ohio troops, both in the field and to be recruited, which it would have been highly improper, if not unsafe, for the governor to give. The governor said, impatiently, to his private secretary, "Give the gentleman an evasive answer."

The secretary said, "Well, governor, how shall I put it?"

The governor answered, "Tell him to go to hell."

"Here's an account of a man," said Mrs. Gadsby, "who hasn't spoken a word to his wife for three years."

"That's rather a rigid adherence to one of the rules of politeness," said Gadsby.

"Rule of politeness?" said Mrs. Gadsby, in a scornful tone.

"Yes—never to interrupt a lady while she is talking."

"I've come to kill a printer," said the little man.

"Any printer in particular?" asked the foreman.

"Oh, any one will do; I would prefer a small one, but I've got to make some sort of a bluff at fight or leave home, since the paper called my wife's pink tea a 'swill affair.'"—Indianapolis Journal.

"Yes, every man says he's the life's image of his mother."

"Sure, an' it's a promisin' lad he is in other respects, Mrs. Casey!"

SELECTIONS

POPULAR NAMES OF WARS

THE conflict between the United States and Spain has passed into history as the "Spanish-American" war. At first glance there is nothing strange in this fact. Nobody has ever found out the real source of the names of the millions of objects and events. Ordinarily it might almost seem that names were given by accident or chance. The matter of naming wars, however, seems to follow a set rule. Examination reveals the fact that in almost every case the designation of a war by a certain popularly accepted name shows at once the victor and the vanquished, and that in such cases the first name, if two be given, or the one name, if there be only one, is the name of the conquered nation. The two that will at once occur to any one's memory are the "Franco-Prussian" war, in which the French were defeated, and our own "Spanish-American" war.

But—there are others. In the Trojan war, so called, the Trojans were defeated by the Greeks, and Troy was besieged and captured. The Macedonian wars were gained by the Romans. In the two Punic wars (Punicas: Phenician; Carthaginian, because Carthage was a Phenician colony) the Carthaginians were defeated and Carthage was seized by the Romans. In modern times the "Napoleonic" wars, so called, ended in the destruction of the armies of Napoleon and, the capture and imprisonment of the emperor. The "Indian" war of 1841 resulted in the establishment by Great Britain of its power over the Indian Empire. The "Crimean" war was significant of the defeat of Russia by the allied armies (1856). The "Austro-Italian" war (1859-1860) ended with the defeat of Austria and the independence of Italy. In the "Schleswig-Holstein" war (1864) the Danes were defeated and forced to cede Holstein and Schleswig to the victorious Austro-Prussian coalition. It was of this war about a very complicated situation that Disraeli said, when asked to explain it, that only two men, of whom he was one, in the whole United Kingdom, had ever understood what it was all about; the other man was dead, and he had forgotten. Next comes the "Austro-Prussian" war, in which Prussia, by winning the decisive battle of Sadowa, defeated the Austrians. Then we have the "Franco-Prussian" war, ending at Sedan (1870) with the annihilation of the French. The "China-Japan" war, in which the Japanese were conquerors; the "Graeco-Turkish" war, resulting in victory to the Turks; and our own "Spanish-American" war completes the series, and seems to sustain the contention that wars are named from the conquered and not from the conquerors.—New York Sun.

CHINAMAN DID NOT TRUST

"Speaking of laundries," said a Chicago woman who was entertaining friends, "I had a most amusing instance once of trying to obtain laundry service, and it was in the kingdom of the celestial laundryman, too—I mean his American kingdom—Washington, D. C."

"Tell us about it," entreated her friends; and Mrs. B. said:

"I was visiting in Washington, and not only had seen the ordinary, every-day Chinaman in his stronghold, but had been at the White House on a reception day when the members of the Chinese legation had paid their respects to the president. I was charmed with their gorgeous apparel, the length and variety of their pigtails and their genuflections. On Sunday I attended the Chinese gathering in the C Street Methodist church and saw the Chinaman studying the Bible with a pretty American girl for teacher. He was dressed in full Chinese costume of silk or satin, and made a picture, and he was obedient but shy."

"Who were the teachers?" asked one of Mrs. B.'s guests.

"The daughters of senators and congressmen, some of the fair society girls of Washington, and is it any wonder that now and then a Chinaman fell hopelessly in love with his teacher and embarrassed her by presents of live ducks and other tokens of his affection? Well, I promised my Washington friends to give my laundry to a Chinaman,

and one particular Chinaman at that, and one day, happening to be out alone, I stopped at the laundry in question and saw the identical Sam Che Lung to whom I had been introduced the preceding Sunday. He was not dressed in his womanish finery for business, but looked a very ordinary celestial. The dialogue which followed was something like this:

"Who are you?"

"I gave my name and told him where I had seen him.

"Where live?"

"I mentioned the private hotel where he was to send for my laundry.

"Me not knowy."

"Then he handed me a printed circular, which gave in English the price per dozen, and pointing with a broad, yellow forefinger to a conspicuous line at the foot of the list, walked off and left me. I got out on the street as quickly as possible and then perused that line. It read:

"Strangers not get trust. Must come recommended by policeman on their beat."—Chicago Times-Herald.

CONNECTICUT WORM TURNS

"It's pretty nearly time that we heard the last of Connecticut's wooden nutmegs," said a New Haven fruit dealer the other day, pointing to a bag of nuts which he had lately received from a New York wholesale house. "Our friends over the line, I find, can go us one better, as I have just learned to my sorrow. That bag there, for instance, which I intend to ship back at my earliest convenience, is a notable example in point."

And as he spoke he dived down into its depths and brought out a handful of apparently tempting almonds. "Look all right, don't they?" he continued. "But you hadn't better try to crack them with your teeth, as several of my customers did. Now, what do you suppose those almonds really are, a large consignment of which I received the other day from the New York wholesale house with which I deal? Peach-stones, sir, every one of them! By some infernal process, which I have not succeeded in fathoming, these New York Yankees have succeeded in transforming these peach-stones until they are the most natural almonds in the world, at least so far as looks go. When you take one between your teeth or attempt to apply it even to a nut-cracker you discover the mistake—not till then. I sold a large number of the darn things to several of my best customers, who nearly broke their jaws in their attempts to extract the meat. They have well-nigh ruined my business in this city. I am rapidly getting the reputation of the wooden-almond man. As I say, it is nearly time those New-Yorkers stopped referring to Connecticut as the wooden-nutmeg state."—New York Sun.

IS THIS A TRUE STORY?

A newly arrived Irish servant was installed in the home of a family on the west side last week, and on the first morning of service she was told to go out and sweep the sidewalk. After an absence of something like an hour the housekeeper went out to see what had become of the new servant. She was seen way down at the end of the block, and hard at work. She had gone the block's length, and she said she didn't know where she was to stop.—New York Sun.

THE CORN-FED PHILOSOPHER

"There are three expressions," said the corn-fed philosopher, "too delicate for the artist to seize: the look of a mother watching over the sleep of her first-born; a young man's expression as he meets the one woman of all the world, and an old man's gloat over a good dinner."—Indianapolis Journal.

ORIGIN OF THE GIPSIES

The earliest record of the presence of the gypsies in Europe is 1417. They said that they came from Egypt, but it now seems certain that they came from India. The mass of their language is of Indian origin, though there are also some Greek and Slavic "loan-words."

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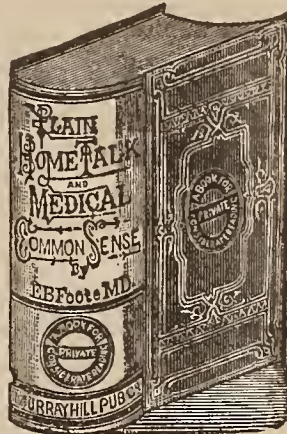
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No. 971. **John Ploughmen's Pictures.** By the late Rev. Chas. H. Spurgeon, the great London preacher and evangelist. This is one of the most original and popular books of the age. The author states in the preface that its object is to smite evil, and especially the monster evil of drink, and it is safe to say that the plain talks of John Ploughman, couched in Spurgeon's quaint sayings, his wit, his logic, his power for good, have accomplished more than any similar publication. This book can be read by every member of the family over and over with increasing pleasure and profit, and every mother who has a son that must face the temptations of the terrible curse of drink will find a good weapon in his hands when she induces him to read this work. Illustrated.

No. 952. **The Arts of Beauty.** By Shirley Dare, the most famous American writer on subjects pertaining to ladies' toilet. This is a splendid book for girls and women. Gives honest and valuable instructions about making the toilet, keeping healthy, young and beautiful, etc.

No. 973. **Æsop's Fables.** These fables were written during the glory of the Greeks, and though old, they are even more popular to-day than ever before. Many of the wise sayings that are repeated on all occasions are from these fables, yet not one out of a thousand know who first wrote them. As "He killed the goose that lays the golden eggs." Æsopus was a slave, but by his mother-wit gained fame that will endure as long as any of the "Seven Wise Men of Greece." But the great beauty of these fables lies in the fact that they are so very simple that all children will read them with delight, all the time unconsciously learning the greatest and best lessons of an upright, unselfish life. Every person should have a copy of "Æsop's Fables." There are about 200 of the best fables given in this book, with forty-nine illustrations and six pages devoted to the life and times of Æsopus.

No. 965. **Thorne's Poultry Book.** A complete guide in every branch of poultry-raising, by a noted authority, giving the peculiarities of all known domestic fowls, with their diseases and the remedies, the best methods of housing, hatching, feeding, etc. 90 illustrations.

No. 983. **Handy Horse Book.** By C. E. Thorne and A. T. Wilson. A complete illustrated manual for horsemen, a treatise on how to breed, buy, train, use, feed, drive and how to tell age by teeth; also a description of the various diseases that horses are subject to, their causes, symptoms, treatment, etc.

No. 967. **Cast Up by the Sea.** A story that you do not want to leave till you have finished it.

No. 979. **Dick Onslow Among the Indians.** This is a thrilling Indian story, and now that the red man has about passed away, the boys will only be able to learn of the habits and customs of the first Americans by reading such books.

No. 977. **Robinson Crusoe.** By Daniel Defoe. The life of Crusoe and his man Friday, on a lonely island, has enlisted the sympathy of more boys than the heroes of any other story, and to-day it is even more popular than ever before. It satisfies their thirst for adventure without the demoralizing effects common to many boys' stories.

No. 990. **On Her Wedding Morn.** By Bertha M. Clay. In the world of fiction there have been but few characters to whom the sympathies of the reader goes out with more tenderness than Hulda Vane, the heroine. This is the companion novel to "Her Only Son," and will be read with the same intensity of feeling, with mingled joy and sadness as the characters in the book have cause for tears or laughter. It is a love-story that must appeal to every reader.

No. 950. **A History of the United States.** A very interesting and reliable work brought up to date.

No. 991. **The Fatal Marriage.** By Miss M. E. Braddon. This is a thrilling story, in which a man marries a lovely girl for her wealth, and as it should always be, he came to grief as a reward for his deception.

No. 969. **Short Stories.** A book containing a number of short stories of adventures, which will be eagerly read by boys and girls.

No. 978. **Indoor Games.** This book will introduce many games, amusements, simple tricks with handkerchiefs, strings, etc., to entertain visitors and friends.

Below we offer ten popular books written by Charles Dickens, one of the greatest novelists who ever lived. These books abound in wit, humor, pathos, masterly delineation of character, vivid description of places and incidents. They are intensely interesting to children as well as grown persons.

No. 980. **Oliver Twist.** By Charles Dickens. This is a great favorite. The hero is a little pauper boy whose biography has, at different times, enlisted the sympathies of the whole reading world.

No. 996. **The Hallowed Man.** By Dickens. An interesting love-story into which are gathered some of the truest and noblest of the bright thoughts of the wonderful author.

No. 953. **The Cricket on the Hearth.** By Charles Dickens. This is a simple tale of home life, and being a fairy tale, is sure to interest the children. The story opens about dusk, with Mrs. Perrybingle putting on the tea-kettle, which soon begins to have gurgles in the throat, and indulge in vocal snorts.

No. 995. **The Battle of Life.** Dickens.

No. 997. **Two Ghost Stories.** Dickens.

No. 982. **A Tale of Two Cities.** Dickens.

No. 994. **A Christmas Carol.** Dickens.

No. 954. **A Goblin Story.** Dickens.

No. 981. **Great Expectations.** Dickens.

No. 998. **Four Christmas Stories.** By Charles Dickens. Oftentimes one wants to read something short, yet interesting and elevating. These short stories by Dickens are unexcelled.

No. 955. **The Scarlet Letter.** By Nathaniel Hawthorne, one of the greatest authors America has produced. It is a romance of intense interest, exhibiting Hawthorne's extraordinary power of mental analysis and graphic description. The entire book is of a high moral character, and can be read with profit by every member of every family.

No. 968. **Recipes for Making 200 Kinds of Soap.** The art of soap-making is very simple, and with these recipes any lady can make all the soap needed for her family.

No. 957. **How the Widow Bedott Popped the Question to Elder Sniffles.** This book is funny—even funnier than the title implies. The Elder was an old-time Baptist preacher, and a widower. Now, the widow had often ridiculed the Baptists, but the way she changed her tune after she had "sot" her heart on the Elder was a caution, as well as comical. The Elder thought the Widow was rich, and so accepted her proposal. The reader will have many a hearty laugh at their expense, and likely repeat, "Old fools are the biggest fools of all."

No. 985. **Anecdotes of the Rebellion** is a grand collection of war stories and camp-fire yarns. Every anecdote is a true story of some incident connected with the late war. Everyone will be glad to own this book. By telling these stories, a speaker can keep an audience in laughter or tears at will. It gives anecdotes of Foragers, Raiders, Scouts, Stories of Prison Life, Union and Confederate Spies, of the Generals, Lincoln's jokes, etc., etc.

No. 989. **Her Only Son.** By Bertha M. Clay, author of "The Shattered Idol." "On Her Wedding Morn," and other noted books. For stories of love, adventure and romance, delightfully told, replete with stirring incidents that will hold the reader from the beginning to the end, there are a few better than those of Bertha M. Clay. "Her Only Son" is fine. It is just the novel to read in a single evening, for once you begin you can't lay it down till you know the end.

No. 951. **Herbert's History of the Civil War.** An authentic account of that great struggle between the North and South now so happily healed over in fraternal and patriotic friendship.

LECTURES OF HENRY DRUMMOND

Prof. Henry Drummond is without doubt the most popular writer of the age. It is with much pride that we are enabled to offer three of his most popular works. If you read one, you will want all; and if you read them once, you are almost certain to read them over and over.

For simplicity, truthfulness, gentle yet mighty force in statement, and loving loyalty to God, they are unequalled by anything ever written on the subject. They will be angels of mercy to every home that gives them a welcome place on the reading-table.—Quarterly Review.

No. 964. **The Greatest Thing in the World.** By Henry Drummond. This book is on love as taught by Christ and the disciples; and if any one doubts that love is the greatest thing in the world, and if they want to be made stronger in their love for all things, they must get this book by all means.

No. 963. **Changed Life.** By Henry Drummond. If you want a practical solution of the cardinal problem of Christian experience, read this book on "Changed Life." You will be drinking at the fountain of eternal life.

No. 962. **Peace Be With You.** By Henry Drummond. This book might be called a short treatise on Rest, Joy, Peace, Faith and Light. It is so simple, yet so grand and so clear, that you lay the book down feeling that a new and brighter day had dawned in your life.

No. 992. **Old Mother Hubbard, and Other Nursery Rhymes and Jingles.** Illustrated. For generations these rhymes have delighted the children. The conical pictures, the fairy stories and short verses are a never-ending source of delight. This is the complete book, containing one hundred and thirty-nine stories and over seventy illustrations, including "Old Mother Hubbard," "This is the House that Jack Built," "Yankee Doodle Came to Town," "Tom, Tom, the Piper's Son," etc.



She went to the barber's,
To get him a wig.
And when she came back
He was dancing a jig.

There are seven more pictures and fourteen verses similar to the above to the story of Old Mother Hubbard. The book contains one hundred and thirty-nine stories and over seventy pictures and illustrations. This is one of the best books for children in the entire list.

No. 959. **The Counting of Dinah Shadd.** By Rudyard Kipling. It would be like "painting the lily," or "gilding refined gold," to attempt to praise Mr. Kipling's works. His "Plain Tales From the Hills," "The Phantom Rickshaw," in fact, all his stories are so fresh, so original, so new, that to see the name of Rudyard Kipling appended to a story sends a thrill of delightful anticipation through one; and in this case the anticipation cannot fail in being surpassed by the realization. The interest is kept up from the beginning to the close, and we feel the better for the half hour's change from the prosaic, dull, every-day life to the scenes with which Mr. Kipling has surrounded us by his matchless skill.

No. 999. **The Idle Thoughts of an Idle Fellow.** By Jerome K. Jerome. For that common but extremely unpleasant complaint, "the blues," this book is a pleasant and effective cure.

Mr. Jerome is sometimes called the "English Mark Twain," and is certainly one of the best living writers of pure, wholesome fun. There is not a dull line in the book. Every paragraph is scintillating with flashes of brilliant wit. Who has not, at some time or another, had "the blues," or been "hard up?"

Who has not been in "love?" For a royal treat, read the author's thoughts on these and numerous other subjects. The "thoughts" which fill a book may be "idle," as the author terms them, but they certainly emanate from a busy brain.

No. 961. **Dr. Jekyll and Mr. Hyde.** By R. L. Stevenson. 'Tis true in literature as in other walks of life, that occasionally success seems to be attained in a single bound. While the name of Robert Louis Stevenson could hardly be said to be literally "to fame unknown" previous to the publication of "Dr. Jekyll and Mr. Hyde," yet contrasting the immense success of the book to that of his former works, it may be said to be almost true. The action, the strangeness, the style of writing, all combine to make up a book so fascinating that criticism of its possibilities or impossibilities are unthought of in the absorbing interest of the story, and later, when released from the thrall of the writer's genius, one is still lost in admiration of an author who can control the thoughts and feelings of his readers in, and by his magic pen almost imbue with life the creatures of his own imagination.

No. 958. **The Merry Men.** By R. L. Stevenson. When an author's works live after him, they are, as a rule, worth reading. The stories by Stevenson have stood this test, and are now widely read. "The Merry Men" is a story that you will not forget soon after reading it.

No. 975. **Bread and Kisses.** By B. L. Farjeon, author of "Grief," "Joshua Marvel," and other popular books. This might be called a book of sermons in a novel. It tells a story of two loving hearts, who begin their home in poverty, and then while the author is carrying them from their home up through the vicissitudes of life to greater places, he gives many arguments why people should be more generous and less selfish, why the rich should be more mindful of their responsibilities because of their wealth, and why honesty is the best policy. Illustrated.

No. 956. **The Courtship of Widow Bedott and Mr. Crane.** If there is any truth in the old saying, "Laugh and grow fat," then the Widow Bedott books will help to make lots of fat. Mr. Crane was a neighbor, and a widower. He frequently called at the Widow's house, and she naturally thought he was courting her, so she tried to encourage him and get his courage up to the point of proposing. She succeeded, but he asked the Widow for the hand of her daughter Malissy. Then the Widow saw her predicament, and how she did storm! If you wait a hearty laugh, try the Widow Bedott books.

No. 984. **Gulliver's Travels.** Tells the supposed travels and surprising adventures of Lemuel Gulliver into an unexplored part of the world, where he met with a race of people no larger than your hand. A great favorite with boys and girls, who like to read books of travel. Illustrated.

No. 960. **A Bird of Passage.** By Beatrice Harraden, author of "Ships that Pass in the Night," which had a wonderful sale through America and England. Few ladies have written more popular stories than Miss Harraden. "A Bird of Passage" is original and interesting.

No. 976. **Noble and Heroic Deeds.** Compiled by A. D. Hosterman. This book consists of sketches from the lives of men and women who became famous for noble and heroic deeds, with incidents in their lives.

No. 993. **Mrs. Candle's Lectures.** This is a collection of thirty-six of the best lectures by this humorist. If you want something that will make you laugh until your sides ache, get this book. It is full of fun.

10 Books We Will Send Any TEN of the Above Books, and **40 Cents** Farm and Fireside One Year, for only 40 Cents

The supply of the books is limited. Therefore, if a book is ordered the stock of which has become exhausted, we reserve the right to substitute for it a book equally as large or larger. Notice our offer at top of page to refund money if not satisfactory.

When the above offer is accepted the name may be counted in a club-raiser's club. Postage paid by us in each case

Address FARM AND FIRESIDE, Springfield, Ohio

NEW REPEATING AIR-RIFLE



We here offer the new 1899 Globe Air-rifle, which has several important improvements, making it one of the best and most perfect Air-rifles ever invented. ❁ ❁ ❁ ❁ ❁ ❁ ❁ ❁

SHOOTS 300 TIMES....

The ammunition-chamber in the Repeater holds over 300 bullets. The Repeater is operated by pressing down a spring after each shot. The ammunition is B. B. shot, which is for sale in stores everywhere. Ten cents will buy about 1,000 bullets. Owing to its accuracy, hard shooting and the cheapness of its ammunition, this new Globe Air-rifle is popular alike with grown-up people and boys.

DESCRIPTION....

The Rifle is made of excellent material. It is 35 inches long, with nickel-plated barrel. It has a globe sight and wooden stock. It is so simply and strongly made that a bright boy can quickly take it all apart, clean, and put together again. It is a very hard shooter. It will carry a bullet over 500 feet. It is easily and quickly loaded.

We guarantee each and every rifle to arrive safely and in perfect condition and to be as described and to give entire satisfaction or money refunded. ❁ ❁ ❁ ❁ ❁ ❁ ❁ ❁

Premium No. 481
A club-raiser's outfit sent free to any one who wants to get up a club.

We Will Send Farm and Fireside One Year and This Air-rifle for \$1.50

(When this offer is accepted the name may be counted in a club.) See shipping directions below.

We will send this Repeating Air-rifle Free for a Club of SIX yearly subscribers to Farm and Fireside. (See shipping directions below.)

SHIPPING DIRECTIONS The rifle must be sent by express, the charges to be paid by the receiver in each case. The express charges will be from 25 to 50 cents, according to the distance. When packed ready for shipping each rifle weighs a little less than four pounds. In ordering do not fail to give your express-office if different from your post-office address. If 40 cents additional is sent we will prepay the express charges to any express-office in the United States.

1899 Giant Almanac ❁ ❁

Our Giant Almanac is the most complete, reliable and up-to-date Political Register, Treasury of Facts and Annual Reference Book ever published. We guarantee this absolutely or money refunded. We are very proud of this work. It is a volume containing facts, figures and information on innumerable subjects which every intelligent home will have need for almost daily. It is an authority on the things you want to know about. All school-teachers ought to have copies on their desks.

CONTAINS OVER 500 PAGES, EACH PAGE 5 $\frac{3}{4}$ x8 $\frac{1}{2}$ INCHES

ONLY A HINT CAN BE GIVEN OF ITS CONTENTS, AS FOLLOWS:

A complete Record of Political Information, as Popular and Electoral votes by states and counties for President, Congressmen, State Officers, etc., also party platforms, and other political facts.
Complete Monetary Statistics, including those on Silver and Gold.
Tariff History and Laws and Rates in the U. S. and Foreign countries.
Government Statistics, Officers, Salaries, Names of Congressmen, etc.
Statistics on Beet-sugar Industry, its importance, etc.
Population Statistics, States, Cities, Counties, etc.
Educational and Religious Statistics. Immigration Statistics.
Manufacturing, Commerce, Railroad Statistics, Postal Information, etc.
A complete Calendar and Almanac for 1899, and other facts and information too numerous to mention in ten times this much space.

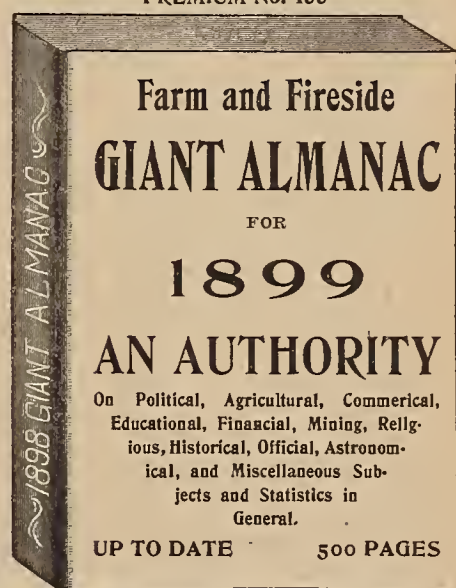
The book contains such a voluminous array of facts and figures, and so many subjects are treated, that it is an utter impossibility to give more than a faint idea of its contents in so small a space. Give the book a chance to speak for itself.

If only 10,000 copies of our Giant Almanac had been printed they would have cost about a dollar a copy, but more than 100,000 copies will be printed the first time. Therefore, in order to get this book introduced, and at the same time boom subscription, we make the following Special offer:

We will Send Farm and Fireside One Year and Our Giant Almanac for... 40 Cents

We Give The Almanac Free for a Club of Two

PREMIUM No. 155



Miniature cut of the Almanac. Actual size of each page, 5 $\frac{3}{4}$ x8 $\frac{1}{2}$ inches

Special Prices and Clubbing Offers

Below we list a number of premiums which have been fully described in previous numbers of Farm and Fireside, but we did not have space to advertise them this issue. We guarantee each and every premium to give entire satisfaction or money refunded. Our free catalogue describes them in full.

6 Silver-plated Nut-picks, and Farm and Fireside 1 Year, \$.50

This set of Six Silver-plated Nut-picks, in cloth-lined box, given free for a club of 2 yearly subscribers to Farm and Fireside.

Fine Fountain-pen, and Farm and Fireside 1 Year, = = 1.00

This Fountain-pen given free for a club of 5 yearly subscribers to Farm and Fireside. Has 14 karat gold point and otherwise same as those sold in stores for \$2. Has chased barrel, length 7 inches, box and filler.

Pearl-handled Gold Pen, and Farm and Fireside 1 Year, 1.00

This Pearl-handled Gold Pen given free for a club of 5 yearly subscribers to Farm and Fireside. A handsome present for a lady.

Scholars' School Set, and Farm and Fireside 1 Year, = .60

This Scholars' School Set given free for a club of 3 yearly subscribers to Farm and Fireside. Contains pencils, pens, etc., worth \$1 at retail.

The Standard Cook Book, and Farm and Fireside 1 Year, .35

The Standard Cook Book contains 1,200 recipes, 186 illustrations, 320 pages, each page 5 $\frac{1}{2}$ by 8 inches. Over 500,000 copies sold. Lithographed cover.

Christ Before Pilate, and Farm and Fireside 1 Year, = .35

Christ Before Pilate is a picture lithographed in 14 colors, and an exact copy of the original, which sold for \$100,000. Size, 21 by 26 inches.

Arts of Beauty, and Farm and Fireside 1 Year, = .35

The Arts of Beauty is the only book written by Shirley Dare, the writer on subjects pertaining to a lady's toilet. 256 pages. Heavy paper binding.

Genuine Oxford Bible, and Farm and Fireside 1 Year, = 2.25

This Bible (without patent index) given free for a club of 12 yearly subscribers to Farm and Fireside. The Bible with patent index given free for a club of 14. Name in gold for 25 cents or two extra names in the club. The finest premium Bible ever offered for such a small club.

Model Steam-engine, and Farm and Fireside 1 Year, = 1.75

This Engine given free for a club of 10 yearly subscribers to Farm and Fireside; or for a club of 5 and \$1 cash. Expressage paid by us.

Boys' or Men's Pocket-knife, and Farm and Fireside 1 Year, .80

This Pocket-knife given free for a club of 5 yearly subscribers to Farm and Fireside. Brass-lined and buffalo-horn handles. Has two blades.

Nickel-plated Scissors, and Farm and Fireside 1 Year, = .70

This pair of fine seven-inch Scissors given free for a club of 3 yearly subscribers to Farm and Fireside. Tempered, ground and nickel-plated.

NOTE—Thirty cents is the clubbing price for yearly subscriptions to Farm and Fireside without a premium to the subscriber. But members of clubs may accept any of our premium offers and their names can be counted in clubs just the same. Renewals and new names, including a club-raiser's own subscription, can be counted in clubs.

Postage or expressage on premiums paid by us except when otherwise specified in advertisement.

Address FARM AND FIRESIDE, Springfield, Ohio

SUBSCRIPTION BLANK

(Cut out and use this blank, or send your order in a letter.)

PUBLISHERS FARM AND FIRESIDE, Springfield, Ohio

Send F. & F. one year, and Prem. No. Am't of Money }

To

Post-office

County..... State.....

Please write "R" or "N" after each name for renewal or new subscription, as the case may be.

Send F. & F. one year, and Prem. No. Am't of Money }

To

Post-office

County..... State.....

☞ For this club of ... subscribers send Prem. No.

To Club-raiser

Post-office

County..... State.....

SIX SILVER-PLATED NUT-PICKS

These silver-plated nut-picks sell in jewelry-stores for 50 cents a set and upward, but by contracting with the manufacturers for an enormous number of sets we bought them at a price which enables us to make the very liberal offer below. The reduced illustration shows the set in box.



Premium No. 125

These silver-plated nut-picks are five inches long, made of fine steel, and silver-plated. They have handsomely turned handles, and are one of the most popular styles. Every family needs a set of nut-picks.

Each set of these silver-plated nut-picks comes in a cloth-lined box which measures 5½ inches long, 3 inches wide and ⅝ of an inch thick. They make a handsome as well as a useful present.

FREE This Set of Six Silver-plated Nut-picks Given FREE for a club of TWO yearly subscribers to the Farm and Fireside.

We will send the Farm and Fireside one year and this Set of Six Silver-plated Nut-picks for 50 cents. **50 Cents** Exact Size.

(When this offer is accepted the name may be counted in a club.)

SCHOLARS' COMPANION

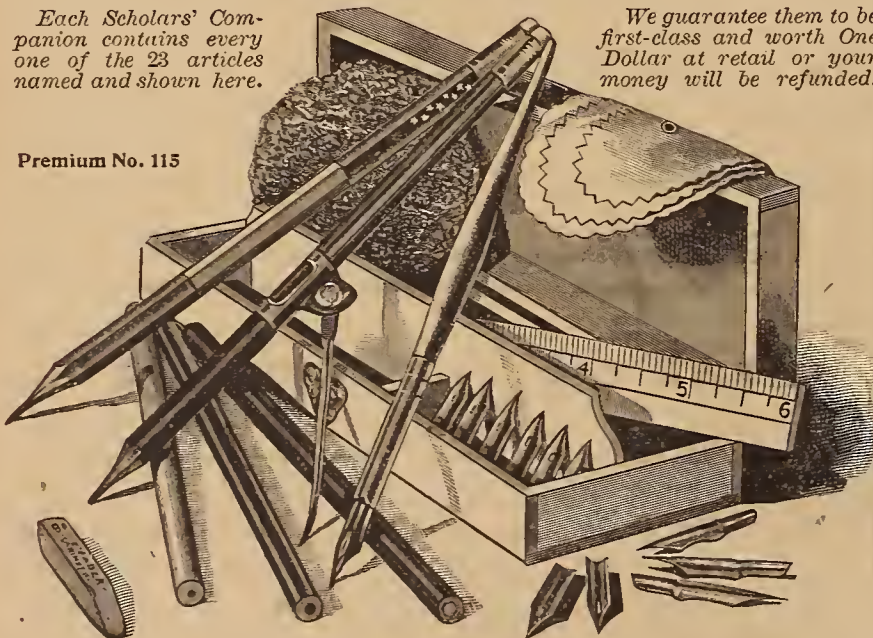
This Scholars' Companion consists of one polished wooden box 8 inches long, 3 inches wide, 1½ inches deep, with lock-corners and brass hinges and fastener, and contains all of the articles named and shown below.

FREE This Scholar's Companion Given FREE for a club of THREE yearly subscribers to the Farm and Fireside.

Each Scholars' Companion contains every one of the 23 articles named and shown here.

We guarantee them to be first-class and worth One Dollar at retail or your money will be refunded.

Premium No. 115



ARTICLE	RETAIL PRICE	ARTICLE	RETAIL PRICE
1 Polished Box	.25	1 Rubber Eraser	.05
12 Steel Pens	.10	1 Red Penholder	.08
1 Pencil, Blue Lead	.10	1 Whole Sponge	.03
1 Pencil, Red Lead	.10	1 Chamois Pen-wiper	.05
1 Black Pencil and Compass	.15	1 6-inch Rule	.03
1 Pencil, Fine Black Lead	.05	1 Wood-covered Slate-pencil	.01
Total Retail Value	\$1.00		

We will send the Farm and Fireside One Year and the Scholars' Companion to any one for **60 Cents**

(When this offer is accepted the name may be counted in a club.)

NOTE THIRTY CENTS is the clubbing price for yearly subscriptions to Farm and Fireside without a premium to the subscriber. But members of clubs may accept any of our premium offers and their names can be counted in clubs. Renewals and new names, including a club-raiser's own subscription, can be counted in clubs.

Postage or expressage on premiums paid by us except when otherwise specified in advertisement

Address **FARM AND FIRESIDE**, Springfield, Ohio

FINE SILVERWARE FREE

THIS SILVER-PLATED WARE can be used in cooking, eating and medicines the same as solid silver. The base of this ware is solid nickel-silver metal, and being perfectly white and hard it will never change color, and will wear a lifetime. This ware will not, cannot turn brassy, corrode or rust. We absolutely guarantee that each and every piece of this ware is plated with the full STANDARD amount of pure coin-silver. In beauty and finish it is perfect.

FULL SIZE

All of the ware is full regulation size. Dessert-forks are specially designed for cutting and eating pie, and dessert-spoons are proper spoons with which to eat soup.

GUARANTEE

We guarantee every piece of this ware to be exactly as it is described and to give entire satisfaction or money refunded.

Will Stand Any Test To test this silverware use acids or a file. If not found to be plated with the full standard amount of pure coin-silver and the base solid white metal and exactly as described in every other particular we will refund your money and make you a present of the subscription. If returned to us we will replace free of charge any piece of ware damaged in making the test.



INITIAL LETTER Each piece of this ware (except the knives) engraved free of charge with an initial letter in Old English. Only one letter on a piece. Say what initial you want.

The base of the table-knives is fine steel highly polished. They are first plated with nickel-silver, which is as hard as steel, then plated with 12 pennyweights of coin-silver. The best silver-plated knives on the market. For want of space pictures of the Gravy-ladle, Berry-spoon, Pie-knife and Child's Set are not shown here, but they are all of the same design and full regulation size.

BIG TEN-DOLLAR OFFER

For Ten Dollars we will send each and every set and piece of silver-plated ware named below, 50 pieces in all, and Twelve Yearly Subscription Certificates to Farm and Fireside. For a Club of 50 Yearly Subscriptions to Farm and Fireside we will send, free of charge, the complete set of silverware, 50 pieces in all.

In the above cases the complete set of silverware must be ordered at one time and sent to one address. This offer is not good to subscribers living outside of the United States. Each Subscription Certificate, when returned to us, will be good for a year's subscription to Farm and Fireside to any address.

PREMIUM OFFERS

We will send the Farm and Fireside one year and the Silverware to any one at the following prices:

Farm and Fireside 1 year and a Set of 6 Teaspoons for	\$.75
Farm and Fireside 1 year and a Set of 6 Forks for	1.25
Farm and Fireside 1 year and a Set of 6 Tablespoons for	1.25
Farm and Fireside 1 year and a Set of 6 Knives for	1.75
Farm and Fireside 1 year and a Set of 6 Coffee-spoons for	.75
Farm and Fireside 1 year and a Set of 6 Dessert-spoons for	1.00
Farm and Fireside 1 year and a Set of 6 Dessert-forks for	1.00
Farm and Fireside 1 year and a Berry-spoon for	.60
Farm and Fireside 1 year and Pie-knife for	.60
Farm and Fireside 1 year and Gravy-ladle for	.60
Farm and Fireside 1 year and Butter-knife and Sugar-shell (both) for	.50
Farm and Fireside 1 year and Child's Set (Knife, Fork and Spoon) for	.60

(When any of the above offers are accepted the name may be counted in a club.)

SILVERWARE FREE

For Clubs of Subscribers to the Farm and Fireside

- Set of 6 Teaspoons given free for a club of four subscribers.
- Set of 6 Forks given free for a club of seven subscribers.
- Set of 6 Tablespoons given free for a club of seven subscribers.
- Set of 6 Knives given free for a club of twelve subscribers.
- Set of 6 Dessert-spoons given free for a club of five subscribers.
- Set of 6 Dessert-forks given free for a club of five subscribers.
- Set of 6 After-dinner Coffee-spoons given for a club of four subscribers.
- One Berry-spoon given free for a club of three subscribers.
- One Pie-knife given free for a club of three subscribers.
- One Gravy-ladle given free for a club of three subscribers.
- Both Sugar-shell and Butter-knife (both) given free for a club of two subscribers.
- One Child's Set (Knife, Fork and Spoon) given free for a club of three subscribers.

GRAND BOOK OF 300 PICTURES

SPECIMENS OF THE 300 PICTURES WERE PRINTED ON PAGES 1, 2, 23 AND 24 OF THE JANUARY 15th ISSUE OF FARM AND FIRESIDE

"Photographic Panorama of Our New Possessions"

Premium No. 43

OUR new book of over 300 photographic views is a marvel of scenic beauty, fascinating entertainment and valuable instruction. The pictures are so enticing and so easy to comprehend that school-children will pore over the book for hours in deepest interest, while parents and teachers will find it a feast for the eye and a mine of timely information. The more than 300 photographs reproduced in the book represent a great deal of time and money, while some of them were taken at moments of extreme danger to life. Each page of the book is 8 inches wide by 11 1/4 inches long.

Glimpses of Our New Possessions....

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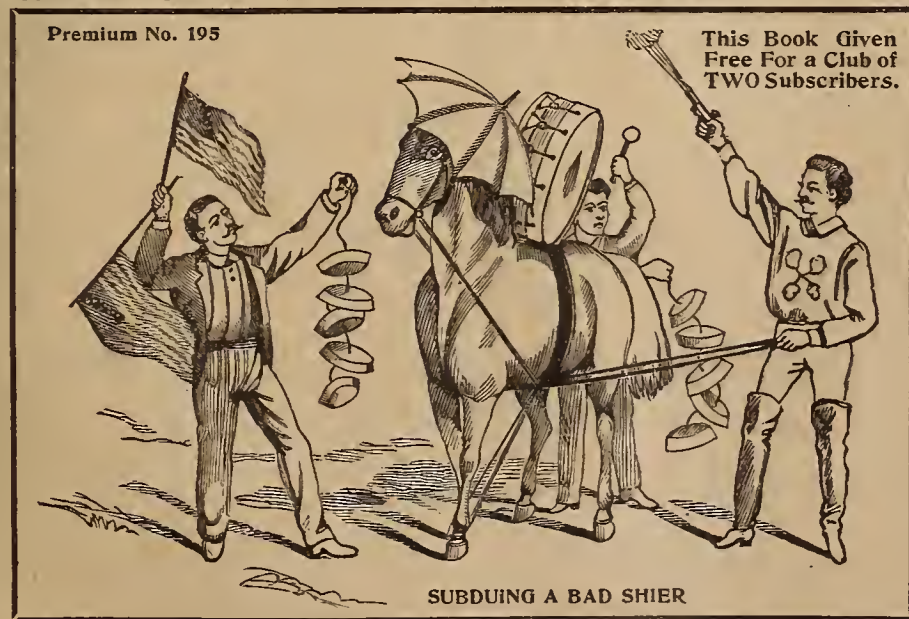
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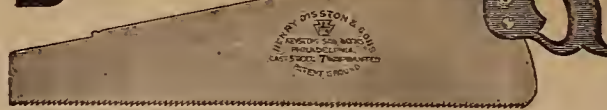
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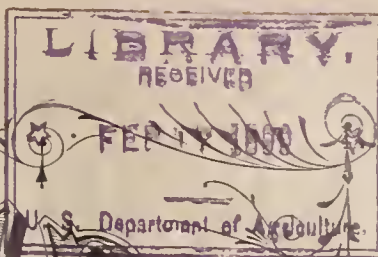
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VOL. XXII. NO. 10

EASTERN
EDITION

FEBRUARY 15, 1899

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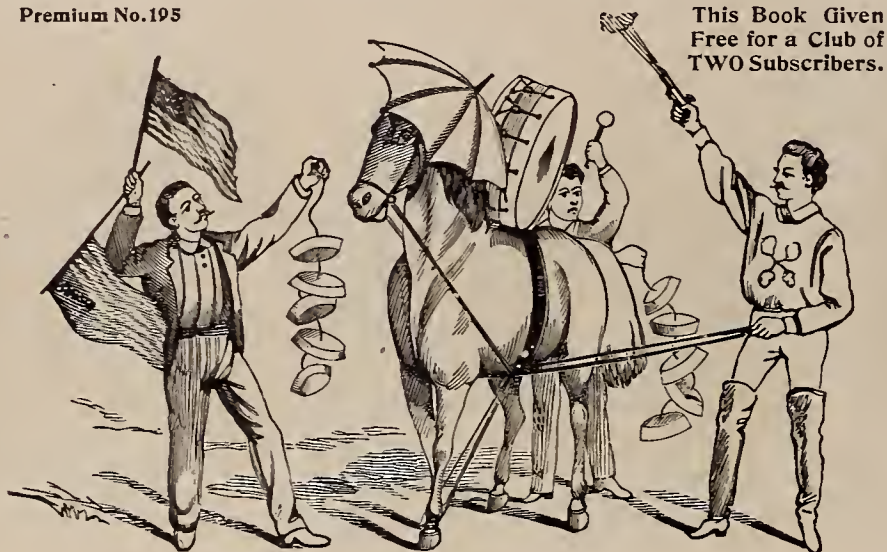
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THE FARM AND FIRESIDE

AGRICULTURAL SCHOOLS

BY PROF. SAMUEL B. GREEN

ORIGIN AND DEVELOPMENT IN EUROPE

On the continent of Europe agricultural education is regarded as a matter of vital importance. Even Spain and Portugal have a few agricultural schools and experiment stations, while in France, Sweden, Norway, Denmark and Finland such schools have received much more careful attention and have reached a high degree of development. In the four Scandinavian countries named there is an average of one agricultural school to each 58,000 of the rural population. But it is in Germany, and especially in Prussia, that they have become most numerous and important.

In Germany there are four classes of agricultural schools. The highest of these are connected with the universities, and require for admission attainments similar to those reached in our best colleges. The agricultural courses offered in the universities are intended especially for educating professors and trained investigators for experiment stations, and for conferring the degree of Ph.D. There are twelve such courses in Prussia. The secondary schools of this kind correspond to our best agricultural colleges, and prepare students for the universities. These secondary schools are intended not for the farming class in general, but for the sons of large landowners, and teachers. There are at least sixteen such schools in Prussia, and as an encouragement to students to attend them, those who have completed the course are allowed to finish their army drill in one year.

The agricultural schools of the third grade correspond most nearly to our high schools. They aim to give a good common and technical education to the sons of farmers, to fit them to be superintendents of farms, and to prepare them for entrance to the secondary schools. There are at least one hundred and two such educational institutions in Prussia.

The fourth, or lowest, grade of these agricultural schools prepares students for entrance to those of the third grade. Of these there are over one thousand in Prussia, the number having been greatly

to those of the lecturers in our best farmers' institute courses. These teachers go among the farmers and advise them as to the best ways of growing and handling crops, the best machinery to buy, the best methods of feeding stock, etc., disseminate the results of the experiment stations, and thus in a measure do away with the necessity for issuing bulletins. Some of these traveling teachers also give instructions in schools of the fourth grade. They also teach in the winter and evening schools of agriculture, which constitute another class of schools that are rapidly increasing in number and importance. Besides these there are in Prussia twenty schools for teaching the shoeing of horses, fifteen for dairying, nine for irrigation, nineteen for household economy, several for agricultural bookkeeping, and several for teaching the manufacture of alcohol, starch, yeast, grape-sugar, etc. Agricultural instruction is also given in some of the normal schools in Germany. Instruction in the schools of the third and fourth grades, while including many of the underlying principles of this science, varies much in its application, and is especially adapted to the agricultural conditions of the section in which it is taught.

INTRODUCTION INTO THE UNITED STATES

Agricultural schools were introduced into this country about thirty-five years ago, and were inspired by the great results that had been accomplished by similar schools in Europe up to that time. Such a strong case was made out for them that Congress in 1862 made a liberal grant of public land to each state and territory for this purpose, and as a result each of them has at least one agricultural school.

At first the teaching of agriculture in this country was done in a blundering sort of way, owing to the lack of competent teachers. Our farmers generally ridiculed what was termed book-farming, and opposed the agricultural colleges for many years. Farming as then practiced even by the more intelligent was such a simple matter that abundant physical strength, the ability to use farm implements well, the ability to buy and to sell to advantage, were considered the chief necessary qualifications for success.

proved breeds of live stock has called for much discriminating judgment in rearing, breeding and feeding them. Since progress has been very marked in all agricultural lines more information is needed than formerly to carry on farming successfully.

Another very important factor in changing the systems of farming in this country and making higher education desirable has been the introduction of cheap and rapid transportation. Aside from the effects of this on the transportation of staple products it has made possible the use of more remote lands for growing those crops that heretofore had to be grown near the points of consumption. Thus the fruit-growers of Oregon and California and the stock-raisers of our great continental plains are large and regular contributors to the markets of our most distant eastern cities and the continent of Europe. Only a few years ago the dairymen of New York thought there was no danger of any serious competition in the eastern cities by the butter-makers of Minnesota, Wisconsin and Iowa, but within the past few years the introduction of systematic and co-operative dairying and fast, through refrigerator-car service has made it entirely practicable for the farmers of these states, with their almost inexhaustible soils, to sell their butter to the consumers in New York and Philadelphia at a profit, and yet at a price so low that many eastern dairymen have been driven out of the business.

Many illustrations could be easily cited to show that the agriculturist of to-day has much more to contend with than his predecessor of thirty years ago; but, on the other hand, the introduction of new methods, new crops and fertilizers makes soil-exhaustion an easier matter to overcome, and the increased knowledge of insects and diseases has made it practicable to grow crops in spite of them. And cheap transportation, which often makes home competition more close, gives to every grower the markets of the world in which to sell.

Again, with the increase of wealth and opportunities for better living in this country each year sees an ever-enlarging class of people whose discriminating wants are constantly increasing the openings for employ-

portance. Others have courses that were laid out by those who were not sufficiently in touch with the tillers of the soil to understand their needs, which has resulted in a course of study poorly adapted to its purpose. And in other states the standard of entrance to the agricultural college has been raised so high as to put it out of reach of those who would have profited most by it.

In these ways agricultural education in this country has been kept away from the mass of our farmers. Within the last few years, however, the appreciation of this fact has led to the establishment of short lecture courses on agriculture in many of the states, to which no entrance examination has been required, and while such courses have accomplished much good, yet every educator of experience knows that such a course must be very unsatisfactory.

Besides these short lecture courses on general agriculture, dairy schools have been formed in many of the northern states within the last six years. These have generally been well managed, have been helpful, and have been a tremendous stimulus to the dairy industry of the country. The course in these schools is purely technical, generally runs for a term of from four to six weeks, and the work being done by them is improving from year to year as more uniform preparation is being required of those who attend, and as the instructors become more familiar with their work.

THE MINNESOTA SYSTEM

Minnesota was the first state to establish a graded agricultural high school that should lead up to the college of agriculture in the state university, but which would be as complete in itself as the common high schools. This school has been in operation for nearly eleven years, and the results seem to show its wonderful adaptation to the needs of our rural classes. It was established after the agricultural college course in the state university had proved a failure. It has been a success from the start, and has been improved as the needs of the student body showed an opportunity to make advantageous changes in the course of study. In its management little attention has been paid to precedents, but every effort has been



BLACKSMITH-SHOP—MINNESOTA AGRICULTURAL HIGH SCHOOL

increased during late years. Here the children of rural districts are taught the rudiments of an education which arouse in them an intelligent interest in what will probably become their means of livelihood. These schools would correspond quite closely to the best of our district schools if in ours we were to teach besides the common branches the elements of agriculture, had a good garden and nursery in connection with each school-house, and teachers who understood scientific and practical agriculture sufficiently well to interest others in this subject.

Besides these graded schools there are many kinds of special schools. In Prussia, for instance, there are twenty-one for the higher education of gardeners; several for educating what are known as traveling teachers, whose duties correspond somewhat

Such qualifications are even now very necessary for success in agriculture, but of late years farming has become such a very different matter from what it was a generation or more ago that these factors are relatively less important.

AGRICULTURAL EDUCATION A NECESSITY

With the exhaustion of the fertility of the soil a more rational system of agriculture has been made necessary, and the use of manures and fertilizers has become imperative. With the multiplication of crops and the growing of each on a larger scale have come a great increase in fungous diseases, which has made more skill necessary to grow them. With the introduction of new insect pests and the destruction of insect-eating birds our crops are seriously endangered by a source that formerly required little attention. The use of new and im-

ment, as is shown by the great demand for glass-house products, and in other ways. These suggestions of great difficulties to be overcome and great opportunities to be realized mean more than words. They mean that the successful grower of to-day must be more intelligent and better prepared for his life-work than the man of fifty years ago. And the call of to-day for agricultural schools and experiment stations, farmers' institutes and better agricultural papers, all mean that our people are trying to fit themselves for the great possibilities that lie within their reach.

FAILURES AND SUCCESSSES

On receipt of the land-grant money from the national government, some of the states, having no faith in the possibilities of agricultural education, belittled their course in agriculture, so that it is now of little im-

directed toward making it most helpful to the student body. This is one of the few schools in this country which has been started in order to educate farmers' sons to be better farmers. The course here is comprised in three school years of six months each, commencing about the first of October and continuing until about the first of April. It is open to both sexes who have completed a common school course in English grammar, arithmetic, history of the United States and geography as prescribed by the state department of public instruction. As laid out it includes a good high-school education in the common English branches. The subjects taught are agriculture, dairying, dairy husbandry, fruit-growing, vegetable-gardening, study of breeds, handling grain and farm machinery, veterinary science, dress-

[CONCLUDED ON PAGE 8]

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FOR some time during the siege of Chattanooga in the Civil War the Union army was near the starvation-point. Describing the situation in his "Personal Memoirs" General Grant says: "The men had been on half rations of hard bread for a considerable time, with but few other supplies except beef driven from Nashville across the country. The region along the road became so exhausted of food for the cattle that by the time they reached Chattanooga they were much in the condition of the few animals left alive there—'on the lift.' Indeed, the beef was so poor that the soldiers were in the habit of saying, with a faint facetiousness, that they were living on 'half rations of hard bread and beef dried on the hoof.'"

In the war with Spain the phrase "beef dried on the hoof" has been superseded by the notorious one of "embalmed beef."

Sifted out of the mass of testimony given to the Commission of Inquiry the truth appears to be that some one supplied some of the transports conveying our troops from Tampa to Santiago with fresh beef treated with chemical preservatives. The experiment was a rank failure, and produced a nasty controversy.

The injury done, however, is not comparable with that being done now all over the country by the use of similar "preservatives" in various food products. Recently investigation developed a very bad case of "embalmed milk" at Kansas City. In a crusade against adulterated milk the health officer discovered an extensive practice of adding to skim-milk a cheap artificial butter-fat and a chemical preservative, and selling the villainous compound as fresh milk. Upon analyzing the "preservative" the city chemist found it to be formaldehyde colored with a little aniline dye. The city authorities have commenced legal proceedings against both the dealers in milk preservatives and adulterants and the dishonest milk-mixers.

Commenting on the preservative used in making "embalmed milk," the Kansas City "Journal" says:

"Formaldehyde, the use of which is becoming so general in the adulteration of milk, is a condensation of the fumes of wood alcohol, and as used as a milk adulterant is generally

known as formaline. It forms the basis of embalming-fluids, and a very small amount of it injected into the arteries of a dead person will keep the flesh hard and sound for an indefinite period. When milk is adulterated with it it is really embalmed, and if sufficient of the stuff is used the milk will keep fresh for weeks. . . . The principal purchasers of it in Kansas City, aside from milkmen, are undertakers. In large enough doses it is a deadly poison, and unless the criminal practice of using this embalming-fluid in milk is stopped it is only a question of time when some careless milk-dealer will get too much of it in his milk-can, and pave the way for a number of funerals, aside from the nauseating idea that must sometimes occur to milk-drinkers that they are partaking of a fluid that science intended only for use on dead bodies."

Professor H. W. Wiley, chemist of the department of agriculture, delivered an address at the recent annual meeting of the New Jersey State Board of Agriculture on the importance of human food and honesty in food products. In the course of his address he spoke as follows concerning the use of preservatives in milk and other food, and in answer to those who claim that many of the chemical preservatives were not harmful: "All changes, such as the souring of milk or fermentation in any way, are caused by microscopic organisms, digestive ferments and the like. The same organisms continue the work of digestion in the stomach, and if they are not present the food cannot be properly assimilated. Now, the chemical preservatives placed in milk or other food destroy these ferments. The food, of course, will keep longer, but when taken into the stomach the preservatives are still present to destroy the ferments of digestion, making the proper assimilation of food impossible. They should in no case be used. The only proper method of preserving food is the natural one by heating so as to destroy the ferments in the food. When the food is taken into the stomach the ferments there will start and complete the process of digestion."

UNLESS the killing of birds for their plumage is stopped many useful kinds will soon become extinct. The feather fashion has not the slightest regard for the interests of agriculture, nor concern about the disastrous consequences that will surely follow the destruction of insect-eating birds. It is high time for the friends of the birds—the best friends of the gardener, fruit-grower and farmer—to put an end to this wanton slaughter that spares neither sweet singer nor insect foe.

In an article on the necessity of stopping the destruction of bird life, Mr. William Dutcher, treasurer of the American Ornithologist's Union, says:

"According to the census of 1890 there were in the United States the enormous number of 4,564,641 farms, with a total acreage of 623,218,619. The valuation of these farm-lands is placed at the sum of \$13,279,252,649. The labor of the farmer and fruit-grower is repaid by products to the value of \$2,460,107,454 a year, but it is said that insects and rodents destroy products annually to the astonishing money value of \$200,000,000, even with the birds as protectors. Just imagine what the additional loss would be were all the birds destroyed. They are fast being exterminated, and unless that large class of the population, the agriculturists, awaken to the gravity of the situation and absolutely demand that no more birds be killed for any purpose whatever they will soon feel the short-sightedness in actual dollars and cents. A difference of one per cent in the value of the farm products amounts to the enormous sum of \$24,601,074. The birds are now killed for two purposes only: for food and millinery ornaments. For food only a few are shot; namely, the game-birds, and those only during restricted portions of the year, so that they do not materially affect the result. There is no excuse for shooting the second class of birds, as their value as millinery ornaments is far less than their value as insect-destroyers.

"Besides this contrast the difference in the money value of the two interests that are opposed to each other. By the census of 1890 we find that the total capital invested in the millinery and lace trade is \$22,939,430, and the cost of the materials used that year was \$27,345,118. Place the two interests side by side, thirteen billions as against twenty-three millions. Again, an annual product of 2,212 millions as against twenty-seven millions. I ask, and I wish I could

shout my question in a voice so loud and clear that every man, woman and child in this broad land of ours could hear it. Have the milliners, with their paltry interests, any right to jeopardize the safety of the agricultural interests? Ponder! A difference of only one per centum in the annual product of our farms and gardens amounts to more than the entire millinery and lace interests in the United States. Will the farmers and fruit-growers remain silent much longer and permit the birds, their best friends, to be killed that a trifling interest like the millinery trade may make a few more dollars at the sacrifice of so much that is beautiful, as well as of economic value?"

There are many state statutes on this subject. There are now two bills before Congress which, if passed, will provide the necessary uniform law throughout the country. But legislation, even clear and explicit, needs the support of strong public sentiment in favor of bird protection. One of the methods of cultivating this sentiment suggested by Mr. Dutcher is that farmers' clubs, institutes and horticultural societies take up the subject of bird protection.

"The birds," he says, "protect the farmer; they work for him more faithfully and continuously than any other helper he can get; let the farmer recognize this, and in turn let him protect the birds. It would be a wise investment in actual dollars and cents for every farmers' club and institute in this land to employ a naturalist to teach the names of the birds about them and the part that each one takes in the preservation of Nature's balance. I believe that when the farmers, their wives and children once become well acquainted with the good the birds do in the meadows and orchards, the gardens and forests, it will be dangerous for any one to destroy one of the feathered helpers."

THE second annual meeting of the National Pure Food and Drug Congress was held January 10-21, in the city of Washington, and was attended by more than two hundred delegates from thirty-three states. The president of this organization is Jos. E. Blackburn, dairy and food commissioner of Ohio; the corresponding secretary, A. J. Wedderburn, Washington, D. C., and the recording secretary, Franklin Dye, secretary of the state board of agriculture of New Jersey.

There are now two "Pure Food and Drug" bills before Congress, copies of which can be obtained on application to senators and representatives. Members of Congress who are working energetically in this practical reform should receive hearty support from all consumers of food and drug products, and from all honest producers and dealers. The fraud of adulteration has grown to enormous proportions. Both the consumer and the honest manufacturer need the protection of national legislation. One object of the Washington meeting was to aid in securing pure food legislation.

The scope of the discussion is indicated by the following brief extracts from addresses made before the congress:

In a brief, pointed address Senator Mason, of Illinois, said that manufacturers and dealers should be obliged to sell goods for what they are, as a protection to the great mass of people who are too busy or too ignorant to inform themselves about these deceptions. He advised organization in favor of pure food legislation, saying that its enemies were organized and were bringing all kinds of influences to bear in opposition. He said that men who are willing to poison the community for gain are not above trying to bribe legislators, and he urged that those in favor of pure food laws should stand by the legislators who, in their championship of such regulations, incurred the enmity of large commercial interests on the other side.

Representative Brosious, of Pennsylvania, author of one of the bills now pending in Congress, said:

"The principle which underlies the pure food legislation we are seeking is that it is the duty of government to supply as far as it can a health-producing environment, to promote commercial integrity and honesty, and advance the condition of human well-being. . . . It was the wise remark of Kingsley that man is the most precious and useful thing on the earth, and no cost spent in safeguarding him from the dangers that beset him in society is thrown away. Indeed, Emerson was wholly right in suggesting that the only political economy worth

having is that which has for its object the care, culture and comfort of the human family. And it is not only to be protected against injury, but deceit and imposition as well.

"When the people create a sentiment which demands legislation it is sure to come. . . . No congress can get so far away as not to hear your call or so high as to be beyond your reach or so mighty as not to fear your reproach."

Hon. James Wilson, secretary of agriculture, in his admirable address before the convention, spoke of the importance of guarding the purity of our food, and said that national legislation was necessary to supplement that of the states. He told of the injury done to the commerce of the United States by the exportation of impure articles of food, bearing the names of American dealers, saying that if there were a law forbidding impure goods to be placed on the market, then they would not be sent abroad, to the injury of our trade.

Hon. J. H. Brigham, assistant secretary of agriculture, spoke of the change that had taken place in the quality of food. When he was a boy, although food was not always as well prepared, it was pure. Now, however, adulterations meant large gains to the dealers, and it was difficult to get pure food supplies.

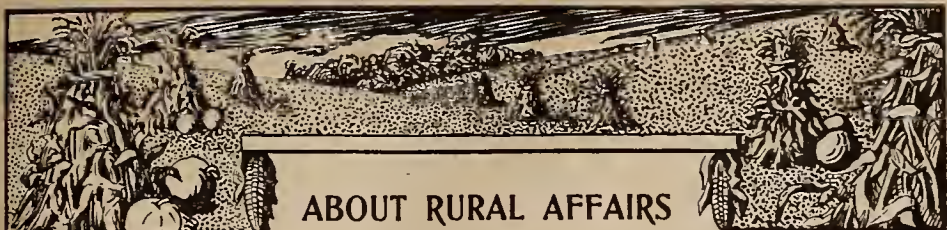
Mr. Paul J. Flinn, of New Jersey, speaking of the effect of adulteration and its reactive effects on the farmer, said that the agricultural classes suffered deeply from those abuses which the proposed legislation by Congress is intended to remedy. "Agricultural industries are the fountain head of all national prosperity. Cripple them, and all other industries suffer. Destroy them, and universal ruin would follow."

How can the farmer prosper when the fruits of his field and the products of his dairy are adulterated and imitated, and the adulterations and imitations misbranded and sold in competition with his own?

President Henry D. Perky, of the Oread Institute, Massachusetts, in his address said that it is highly important that a knowledge of food and its relation to building the human structure be taught in the schools of this country, to the end that children may not be robbed of their birthright to become natural, and, therefore, beautiful, womanly women, and strong, courageous, manly men. "We have recently erected at Worcester, Massachusetts," he said, "one of the largest cooking-schools in the world, and on the twenty-fifth of this month it will be formally opened in order to inculcate and disseminate this doctrine; and I have the good fortune to tell you to-night that by reason of the act of a generous party, each state and territory is to appoint, through its governor, a pupil to come to this school, without paying tuition, board and lodging. . . . The people of this country do not understand the subject. There is not one man in a hundred thousand that can tell us why he eats what he eats, and give a rational answer; and it makes very little difference whether he is an educated man or not. He eats from the force of habit—his tastes are educated and very often perverted. He eats what he has been taught to eat, but when it comes to the understanding of how to build the human structure, he knows very little about it. He seems to care very little about it, and he cares very little about it because he does not understand it. Of all subjects there is none so important; all others sink into insignificance when compared with the food subject."

In the efforts of the anti-expansionists to defeat the ratification of the treaty of peace there appears to be much studied misrepresentation of facts and deliberate attempts to mislead the farmers and workingmen of this country. In their desperation to gain followers the "aunties" have raised false alarms and made absurd predictions about the effects on American industries of American control over the Philippines.

There is no more likelihood of Congress legislating against the interests of agriculture with the Philippines under our control than without. A congress that will guard the interests of American industries at all can and will guard them just as well with those islands under our control. And as they are responsible for the congress elected by them, the matter rests finally with the people. The whole contention of the anti-expansionists is based on their distrust of the people.



ABOUT RURAL AFFAIRS

Living on the Future It is never safe to make debts on the strength of the income that one may have at a future time. Too many farmers are doing just this very thing. Almost every one of us views his prospects for the future with hope and confidence. We almost invariably overestimate our crops, overestimate the prices we will get for them, and therefore doubly overestimate our future income and future available means. Many farmers make liberal purchases of groceries, dry-goods, clothing, implements, fertilizers, etc., and run in debt for all these things, fully confident that they will be able to meet their obligations from the proceeds of their (overestimated) crops. But frequently when the time comes the money is short and the debts remain unpaid. In short, this practice of anticipating the future is an unsafe and dangerous one. It has ruined thousands of our farmers.

* * *

Spontaneous Combustion A few weeks ago the Kappa Alpha lodge, at the entrance to Cornell campus, was totally destroyed by fire. The fine building had cost \$30,000, and contained \$10,000 worth of furniture and personal effects of students. The fire is supposed to have originated from spontaneous combustion. I hope that the Cornell people will thoroughly investigate this matter. Every little while we hear of this spontaneous combustion business. Whenever a barn or a haystack burns down, and the origin of the fire is not plain, somebody is always ready to blame it on "spontaneous combustion." I confess that I am one of the doubting Thomases. Undoubtedly many of the fires that were supposedly started by spontaneous combustion owed their origin to a match or tobacco-pipe. It is time that this question should be settled for good.

* * *

Clean Milk A good deal of the milk that is put on people's tables is absolutely nasty. If we were always aware how the milk offered to us for our coffee or to drink, was milked and handled we would often refuse to use it. This is the reason I would keep a cow or cows even if the milk from them were to cost more than I could buy it for from the dairyman. Of all things on the table I want reasonably clean milk and good butter. I cannot always depend on my hired help to be as particular about milking as I want them to be. I look after that part of the business pretty closely, and if necessary, attend to the milking myself rather than run the risk of having to eat filthy milk or butter that tastes of cow manure. "On no account," says one of my exchanges, "should the cow be milked in the stable where she has lain through the night. When cows are awakened for feeding in the morning most of them will void both their solid and liquid excrement which had accumulated from last night's food. After this is done, lead or drive the cow into a clean and well-ventilated room used for milking, and the cow should be given the most appetizing part of her rations here." This is good advice, but it is not always convenient to have a separate room to do the milking in. And I do not believe that it is absolutely necessary, either. In very cold weather, of course, the stables are tightly closed, and animal odors and ammoniacal gases will greet you when you enter. In the morning I put feed in the mangers, consisting usually of cut corn-stalks, into which the grain ration is mixed (a mixture of bran, ground corn, rye and oats, with the addition of some oil-meal). Then the stable is carefully cleaned out. By that time the animal odors and gases have been dispersed, and the stable smells perfectly sweet. Curry-comb and brush are used on each cow, and perhaps a rag on the udder if that is not entirely clean. Some rubbing off is never neglected. I also like to have the milker wash his hands before milking. When all these precautions are taken, we can expect to have the milk at least fairly clean. There will be plenty of foreign material in it even then. We cannot be too particular.

* * *

Cows sometimes get into a bad habit of urinating just after one has begun to milk them. In such cases I used to simply stop milking, hang up the milk-pail in a safe place, and throw some clean bedding on the floor

back of the cow when she is done voiding her liquid excrement; and then I finish the milking. Some people follow a different plan, and I believe it is a good and sensible one. When a cow has acquired the bad habit spoken of, set a pail back of and near the cow, and pour a stream of water into it. When the animal hears the splashing (same as when she hears the milk splash into the pail) she will feel the desire to urinate, and after she has done that you have a clear field for milking. Yet, after all, sometimes I feel that we might well use extra precautions against dirt and scales and hair from dropping into the milk-pail, and I have thought of fastening some sort of dress-coat or wrap around the cow, with nothing but the teats sticking out. It seems to me that the milk would taste better. It surely would improve it in cleanliness.

* * *

The Fertilizer Business What a change there has been going on in the fertilizer business in the last few years! Farmers twenty years ago knew no more about the nature and the real value of the fertilizers which manufacturers were offering them, or about the effects that might be expected from them, than they did about what is going on on the moon. And the only thing they could buy in the line of fertilizers were the ready-mixed goods of the manufacturers, and these they had to take on faith, for there was no guarantee, and perhaps not even a notice of their constituents. Now, thanks to the teachings of the agricultural press, and of the agricultural experiment stations in their bulleting, and of the lecturers at the farmers' institutes, almost every fertilizer user knows all about the ingredients that are available for feeding our crops, and about the value and market prices of these things. Then, too, a large number of those who buy and use fertilizers have learned that they can do their own mixing; that they can get their plant-foods much cheaper in the form of standard chemicals, unmixed, than in that of ready mixtures, and that in many cases these standard chemicals can be applied as they are, without being mixed. Fertilizer manufacturers have looked with general disfavor upon these changes in the business. They discouraged the purchase, and in many cases refused the sale of unmixed goods. They begin to see, however, that they must move with the procession or be left behind. I was glad to note a big step in advance in the new catalogue of the Bowker Fertilizer Co. It is indeed a new departure in the fertilizer business, and the firm deserves credit for it. In the first place the company offers "pure chemicals and raw materials for home mixing." Several other firms have done this also; but the one named stands entirely alone, so far as I am aware of, in giving analyses in a definite form. It used to be the way with them, as it is still with others, to give the guaranteed analysis about as follows:

Ammonia.....	3 to 5 per cent.
Available phosphoric acid.....	8 to 10 per cent.
Potash.....	5 to 7 per cent.

Now the catalogue (and the guarantee printed on the bags in the same way) gives it as follows:

Ammonia.....	3 per cent.
Available phosphoric acid.....	8 per cent.
Total phosphoric acid.....	10 per cent.
Potash, K ₂ O.....	5 per cent.

In this way the purchaser knows exactly what he is getting, and he can figure out the value of the article for himself, and on a sound basis. Our leading experiment stations have demanded this "new departure" for some time, and now that this one firm has set the ball in motion, let us hope all others will fall in line. It is a most commendable innovation. The only thing I have yet to criticize is that the fertilizer men insist in quoting ammonia, when it would better be reduced to nitrogen.

T. GREINER.

FRUIT AND ALCOHOLISM.—Fresh or boiled apples are said to be an excellent preventive against the drinking habit. A German physician who has recently published a report on his investigations along this line made the casual observation that drunkards would always refuse to eat apples. He then undertook to treat certain cases of alcoholism by ordering a diet of fresh and boiled fruit and other vegetables. The results were uniformly beneficial.

J. C. B.

SALIENT FARM NOTES

Gapes I think it is safe to say that not to exceed sixty per cent of all chicks that are safely hatched ever reach a marketable age. From the time the little fellow utters his first "cheep" until he reaches the oven he is beset within and without by enemies bent upon his destruction.

One of the most pernicious enemies of young chicks is the gape-worm. The presence of this pest is indicated by a gaping cough or sneeze, the mouth is filled with a sort of froth, and the bird acts as if about to choke—which many of them do unless quickly relieved.

About the quickest way to relieve a chick that is being strangled by gape-worms is to remove the fluff from a small feather, all but the tip, then wet this tip with turpentine or kerosene, and gently push it down the bird's throat, twisting it around as you do so. Great care must be exercised in doing this or the chick will die in your hands.

* * *

The turpentine or kerosene will kill every worm it touches, but it will not reach those in the lower bronchial tubes. The best way to destroy these is to mix one teaspoonful of turpentine and one of asafetida in sufficient warm mash made of wheat-bran, one part, and corn-meal, one part, by measure, for twenty-five fowls. The fumes of the turpentine and asafetida fill the air-passages and destroy all the worms, large and small. Some people keep a lump of asafetida in the fountain from which the fowls drink, and it serves a good purpose in preventing any rapid increase of the pests.

* * *

Whenever a chick is killed by gape-worms it should be burned, to destroy the pests that killed it. Don't bury it, but burn it. Disinfect the yards or runs with sulphuric acid, one pint, and water, ten gallons. In mixing this disinfectant, pour the acid very slowly into the water, and be careful not to get any on the hands or clothing, as it is very corrosive. Wet the earth or floors in the yards or runs thoroughly with this and it will destroy both worms and eggs.

After thoroughly disinfecting with the sulphuric-acid mixture, scatter air-slaked lime over the yards, in the houses, runs and wherever the chicks are kept. It is a good plan to scatter air-slaked lime over the yards or runs where the young chicks are kept at least once every two weeks from March to July; also to dust it over the floors of the poultry-houses, over the porches and nest-boxes and in the brooders. It serves to keep gape-worms, lice and many other pests in check.

Mrs. W. S. B. and A. L. and several others will find in the foregoing a full reply to their queries.

* * *

Bowel Disease Is the malady that destroys the chicks of S. J., Vinnie R. and C. S. This disease is even more destructive of young chicks than gape-worms. It is indicated by clogging at the vent, stoppage of growth, and a weak, continual "cheep." The little bird is constantly under the hen, or standing humped up in the warmest part of the brooder.

This disease is caused by unsuitable food, lack of sufficient warmth, dampness, and a dozen other things. Prevention is ninety-nine per cent better than cure; in fact, an affected chick is almost as good as gone, for even if it should recover it has received such a severe check that it never develops into a fine bird. I always remove the affected chicks as soon as the disease shows itself, and if very bad kill them at once. It is advisable to do this to prevent others from contracting the disease, which they sometimes do by picking at the accumulations under the vent.

* * *

To prevent this disease it is necessary to keep the chicks thoroughly warm and dry all the time; to see that they get lots of exercise and an abundance of pure water and grit. I prefer limestone grit to all others.

During the first three weeks chicks should be fed steel-cut oats, millet-seed and crumbled corn-bread; one of these things at a time, and only as much of it as they will eat right then. I have found it a good plan to change each meal. It is also a good idea to keep a small vessel (so arranged that they cannot get into it) filled with dry wheat-bran by the coop or brooder all the time. They will eat enough of this to keep their bowels in good condition. If they are properly fed about four times a day with the other articles mentioned they will not eat enough bran to harm them. At no time should they be given any wet or sloppy food of any sort.

The best way to give chicks the exercise necessary to keep them in good health when they are confined to the house or brooder by stormy weather is to scatter millet-seed among chaff or straw cut to half-inch lengths. They will busy themselves almost all the day scratching this over to find the seeds.

* * *

Lice Sometimes young chicks are so weakened by the attacks of lice that bowel disease develops before they are three days old. If there are any lice on the mother hen they will leave her and attack the little fellows as soon as they are hatched.

It is a difficult matter to entirely rid the mother hen of lice before the chicks are hatched, but their numbers can be so reduced that they will do but little harm. I set my hens at night, and just before placing each one on the nest I rub lots of fresh Persian insect-powder (some call it buhach) among her feathers, especially under the wings and thighs and along the back and upper part of the neck. If she is placed on the nest very gently she will settle down on the eggs without shaking the powder out of her feathers, and all the lice on her will be destroyed. The nits on her will hatch, however, so I repeat the powdering the seventh, fourteenth and nineteenth days, and when she is taken off with the chicks I apply it again. She is placed in a clean coop and the chicks are not troubled by lice for four or five weeks at least. At the end of that time I remove the hen, give the chicks a good powdering and burn a crumpled-up newspaper or handful of light shavings in the coop. After that the chicks will keep the lice down with the dust-bath.

* * *

When applying the insect-powder to hen or chicks I hold them over a newspaper, and the powder that falls off is returned to the can. It is best, as well as cheapest, to buy Persian insect-powder in lots of two to five pounds at a time, and unless it is in a can that may be closed very tightly, it should be put in glass fruit-jars that can be sealed airtight. It deteriorates very rapidly when exposed to air and light, and it should be kept in a dark, dry place.

Vinnie R. will find it an excellent plan to give the males of her flock a good dusting with insect-powder at least twice a month during the spring and summer. They do not take a dust-bath so often as the hens, and hence often become badly infested with lice. Rub the powder well in among the feathers, especially under the wings and thighs and along the back and neck. It is very probable that it is lice that cause her cockerels to "get the dumps" and wander away from the flock in hot summer weather. Rid them of lice and they will be all right.

FRED GRUNDY.

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AMPLE WHEAT FOR THE WORLD

The eminent publicist, Mr. Edward Atkinson, who has for the past twenty-five years made a special study of the production and price of wheat, in a recent article in "Popular Science Monthly" makes answer to the startling prediction of Sir William Crookes that in a little while the world would have reached the limit of its wheat production, and that following that, with the increase in population, would come a wheat famine. In speaking of the arable land in America, Mr. Atkinson says that two thirds of the land in the United States, not counting Alaska, is susceptible of cultivation, but that on one tenth of it, however, wheat enough could be raised to supply the entire demand of the world, if not a grain were grown elsewhere. Although America produces between a quarter and a third of the world's wheat supply, only a fraction over two per cent of its soil is utilized for this purpose. Mr. Atkinson shows by figures what could be done in Minnesota and the two Dakotas alone. These three states produced the past year 190,000,000 bushels of wheat, and this amount was grown on twenty thousand square miles, or only one eighth of their arable land. In other words, if the Dakotas and Minnesota went into growing wheat as thoroughly as they might, they could, at the present rate of production, furnish more than double the amount now raised in the entire United States, or four fifths of the world's present consumption. Some data, prepared by the Minnesota Labor Bureau, are quoted to show that the business of wheat-raising in that state has been remunerative. This is evidenced by the payment of mortgages on farms. Mr. Atkinson shows by statistics and conclusions that with a fixed profitable price for wheat, vast areas would be opened to cultivation, such as would supply the world's demands twice over.

GUY E. MITCHELL.

OUR FARM

FARM THEORY AND PRACTICE

LIMING LAND.—Lime is one of the essential elements of plant-food. If it were not present in the soil our plants would not grow. Its place in the structure of a plant cannot be taken by any other mineral, and on the other hand it cannot take the place of any other element, such as potash or phosphoric acid or nitrogen, which we have in stable manure or purchase in commercial fertilizers. Lime takes its own place, and that is all. Bearing this in mind, it is remarkable that some farmers continue to believe that lime supplies the soil with fertility in the same way that stable manure does, and that it is right to depend upon it. As a matter of fact, most soils contain more lime than hundreds of crops could remove, and the lime that may be applied seems rarely to be actually needed as a fertilizer.

VERY HEAVY APPLICATIONS.—Although the soil contains as a rule much more lime than plants need for food, some farmers apply three or four hundred bushels of lime to the acre with the thought that they are adding fertility. I have talked with many farmers in the limestone sections of the East, and know that they are getting increased yields from this land so heavily limed. They reason that lime must be a good thing when its use brings better crops. It is a waste of time in many cases to point out the fact that older sections have ceased to lime heavily, or to apply lime at all. The lime is giving results for them, and they are farming for results. A lighter application, some of them claim, is not so effective as the very heavy one. They want good crops and heavy grass, and the lime now gives them. That ends the matter, they think.

THE EFFECT OF LIME.—If the farmers that are using lime so liberally in the place of manure would study the nature and effect of lime their practice would change. They would see that a light application can be made as effective as a heavy one for most soils, and they would see further that these heavy applications are really stimulants that will leave the soil in bad condition some day if they are depended upon for maintenance of fertility. Lime may have several different effects upon land. If the soil is acid, lime sweetens it. If it is a tight clay, an application may make it more porous. If there is a too high percentage of sand, lime may bind it. These effects are desirable, and are obtained by an occasional application of lime. But the leading use of lime in a soil is to break up tough material in the soil, both mineral and vegetable matter, and make it quickly available.

How INJURY IS DONE.—The productivity of ordinary farm soils—that is, soils under ordinary farm conditions—is largely in proportion to the amount of humus they contain. The vegetable matter acts as a sort of sponge in the soil, holding moisture in it, and also keeps a clayey soil loose so that air may enter and tillage may be easy and effective. Lime has an immediate effect in increasing production, partly for the reason that it converts this humus into available plant-food. But this means exhaustion of one of the most important factors in the soil. The soil grows helpless as it loses its humus content, and is much in the condition of the man who spurs himself to extra effort by the use of a stimulant. It may give results for a time, but excessive stimulation cannot replace actual food indefinitely.

LIGHT APPLICATIONS EFFECTIVE.—Heavy users of lime do not regard its cost in the same light as they do the cost of actual plant-food in fertilizers of any sort. The lime cannot be burned and applied for a less average cost than eight cents a bushel. Two hundred bushels to the acre costs about sixteen dollars. This lime is often applied upon the surface of meadows and pasture-land the year before breaking. What is the result? This burnt lime soon changes from its caustic form to a state approaching that in which it existed in the stone before burning. Its effectiveness decreases rapidly as it lies exposed to the air. A much smaller amount under the surface of the soil, coming into contact with the soil particles while yet in its most caustic state, would accomplish the de-

sired purpose, thus making a big saving in the cost of dressing.

RATIONAL USE OF LIME.—A reasonable application of lime—say thirty or forty bushels before slaking—is safe and profitable on much land. It should be evenly applied on an inverted sod, and gotten under surface while in its caustic state. Many soils are slightly acid, and its correction aids productiveness. A light application of lime is nearly always beneficial to clover, and with clover we can restore to the soil more humus than the lime uses up. A reasonable amount of lime does not make the soil heavy. It is my best judgment that large areas of land outside of limestone districts would be benefited by light liming, and the only drawback is the cost of the material. Agricultural lime is sold at kilns for from eight to ten cents a bushel of eighty pounds, but freights are usually prohibitive.

These heavy applications of lime in limestone districts are a thing of the past in the old sections, and will cease everywhere in the course of a few years. Experience teaches that the land cannot continue to stand such stimulation and resulting exhaustion of the vegetable matter of the soil. But on the other hand the area limed should be tenfold as great as it is. Light liming of all acid soils and all those that do not grow clover well, followed by heavy sods and some manure, will some day open up the way for prosperity in many a farming section of the central states. We need cheap agricultural lime and the wisdom to use it lightly to correct acidity and get clover-sods on land that now makes poor catches. A little lime is often a good thing, but a huge amount to the acre is not necessarily a better thing, but in the long run may be a far worse one.

DAVID.

THE CHICKADEE, OR BLACK-CAPPED TITMOUSE

Few of our common birds are warmly enough feathered to endure the winters of our northern states. But the few which do are most welcome and are of considerable value to the farmer.

Of these the titmouse are among the best known and most common. Their sprightly chirp, "chick-a-dee-dee-dee," and saucy manners, as one and another of the flock hop



CHICKADEE, OR BLACK-CAPPED TITMOUSE



EGGS OF APPLE-APHIS, WHICH ARE EATEN BY CHICKADEES

here and there on the pine-trees or in the orchard, hunting in every crevice and bud for some stray insect or egg, have won them many a friend, both farmer and poet.

The desirability of luring a number of these birds to the orchard and encouraging



EGG-MASS OF AMERICAN TENT-CATERPILLAR EATEN BY CHICKADEES



EGGS OF FALL CANKER-WORM, WHICH ARE EATEN BY CHICKADEES

them to remain over winter and nest there in the spring can hardly be overestimated.

Most of our common birds eat many injurious insects during spring and summer, but these pests have then become so numerous that the birds are unable to greatly reduce their numbers. But the chickadees and winter birds feed upon the insect eggs, thus so reducing the first brood in the spring

that even though subsequent broods multiply rapidly the later birds consume enough of the insects to keep them well in check.

This has been well illustrated by an instance in Massachusetts, where Professor Forbush lured the chickadees to an old orchard badly infested with canker-worms. They remained all winter, and as many as two to three hundred canker-worm eggs found in a single stomach. By the aid of the spring birds they consumed the worms, so that this orchard was not seriously injured, while many of those neighboring it were entirely defoliated.

Dr. C. M. Weed, in a recent bulletin upon the food of this bird, records having found as many as four hundred and fifty aphid eggs in a single stomach, and as the chief injury done by plant-lice is due to their enormous numbers, this winter attack upon the eggs is most important.

The oyster-shell scales, so common on apple-trees, and often quite injurious to them, are frequently eaten by chickadees, and I have found as high as forty of them in one stomach, each scale protecting from fifty to seventy-five eggs. The eggs of the tent-caterpillar, apple-bucculatrix and other orchard pests are freely consumed. In fact, about one third of the chickadees' winter food is insect eggs.

Wood-boring grubs and beetles form a large part of the food, thirty or forty often being eaten in a day. Young cutworms and "loopers" are also freely eaten, especially after a February thaw, when they have been forced to the surface of the snow.

The chickadees' food is practically all insects, including a few spiders, for the vegetable matter found in their stomachs is introduced only accidentally, and almost all of these insects are noxious forms.

Chickadees are very fond of pieces of meat, bones, suet, etc., and if such morsels be hung up in the orchard they will be readily attracted and thus be induced to remain as permanent residents.

E. DWIGHT SANDERSON.

ARTESIAN WATER

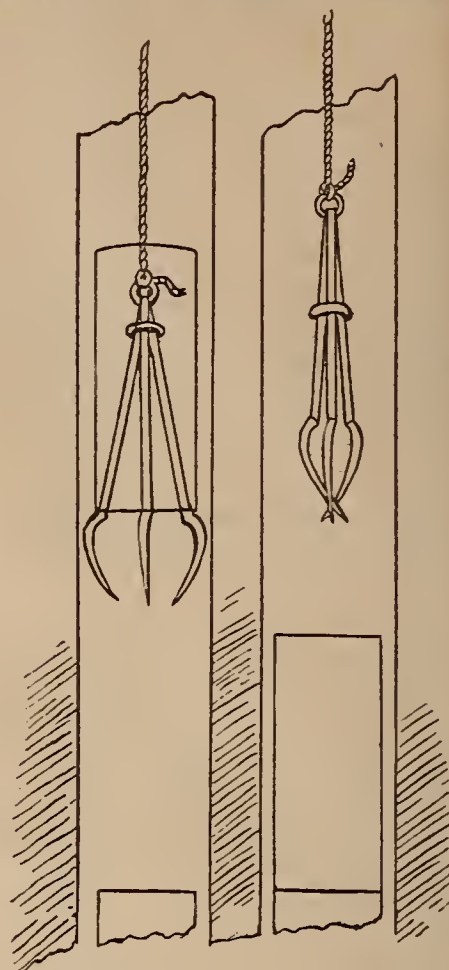
Throughout this section of Texas there are two water-bearing stratas, the upper, or surface, and the artesian, or lower. In many places in this limestone region the surface-water, especially during the dry seasons, is heavily charged with lime, and often with deleterious organic substances which make it unfit for domestic use. When this is the case, the only question to be considered in this artesian area is the cost of sinking the well; and this depends upon the necessary depth and character of the rock material to be penetrated, both of which may be determined with reasonable accuracy by any one acquainted with the geology and artesian-water conditions of the district. Compared with advantages to be secured by an everlasting spring of pure, wholesome water, in quantities sufficient for household and farm purposes, and possibly also for garden irrigation, the cost of drilling even a deep well should cut no figure with those who can command the necessary means.

The non-flowing wells in this vicinity are located near the lines of flowing wells, and the water rises near enough to the surface to be pumped either by hand or wind-power. A never-failing supply of pure water is to be found on every farm in Grapevine Prairie. The greater number of these wells have been drilled within the past four or five years. Most of them were cased with wooden casing down to the slate, which is from ten to forty feet from the surface. Most of the casing was made out of Southern yellow pine, which decays in a few years, and has to be replaced. Iron casing, six to eight inches in diameter, costs from thirty to forty cents a foot. Many of us would have used tiling, but the devices used by those who have put it down heretofore have deterred many from using it.

The casing in my well is rotten, and I am going to replace it with drain-tile, and have made what I call a tile-fork to let them down with, which is safe and does the work expeditiously. The fork is made with three tines, one of them being long enough to form the eye for the lift-rope, as shown in the illustration. All three of them are welded together from the eye down about six inches, but the crook and curve of each tine is given it before they are welded together. After the fork is finished a loose ring is slipped over the eye of the fork, and then the rope is tied into the eye, and it is ready for work. Slip the ring down on the fork sufficiently to close the fork so that it will pass through the tile, and when the bends in the tines are through the tile, slip the ring up until it is loose on the fork, and you are ready to let the tile down into your tubular well. When it reaches the bottom the weight of the tile will be suf-

ficient, with a light jerk, to close the fork. The ring slips down and keeps the fork closed while being withdrawn, and holds it ready for insertion into the next tile. To keep the well free from surface-water, fill up the space around the casing up to the surface of the ground with hydraulic lime concrete.

The fork shown in the illustration is eighteen inches from the rope-eye to the



bend in the tines for the tiles to rest on, and eight inches from bend to end of tine, making the whole length twenty-eight inches. It is made of three-eighths-inch iron, flattened a little and hardened so as to make it more elastic. There is no patent on this device, and any one can make and use it.

SILAS G. LACKEY.

Dallas county, Texas.

CAMEMBERT CHEESE

The Camembert cheese, a well-known article in all French hotels and restaurants, has now begun to find its way into England, Germany and the Scandinavian countries.

The name of this celebrated product is derived from a village in the department of Orne, France, where, during the great revolution, a woman, Marie Harel by name, first made it. The method remained a secret until 1813, when the children of Marie Harel became married and set up small factories in different parts of Normandy. At present there is no secrecy about the Camembert cheese. It is made in the following manner:

Immediately after milking, the milk is set in a wooden bucket at a temperature of from fifty to fifty-five degrees Fahrenheit. In a few hours it is skimmed, whereupon a proper amount of rennet is added. The curd is formed after standing six hours, during which the temperature should be as nearly ninety degrees Fahrenheit as possible, especially at the beginning. In the home cheese manufacture this is effected by placing a wool cloth over the bucket.

When a curd has been formed, it should be taken out with a skimmer and placed in a cheese-mold, which stands on a slanting board in order that the whey can drain off completely. In two days the cheese will be ready to leave the form. Each loaf is then salted thoroughly on all sides, whereupon it is left thus for four days, when the drying begins.

In drying this cheese care should be taken that it is placed where the breeze can touch it directly, such as immediately behind the window-screens. They must rest upon straw mats, and be turned from day to day. In the course of five weeks, when sweating sets in, the so-called refining begins. This means that the cheese is placed in a dark, dry cellar without ventilation, and where a temperature of fifty degrees Fahrenheit is kept as nearly as possible. They must be turned every other day for about a month, and are then ready for marketing.

This is the salted Camembert. It can be made without salting, but in that case will keep only a short while from decaying.

A good Camembert is quite palatable. But here, as in many other cases, success lies in the touch with which it is done.

J. CHRISTIAN BAY.

NOTES FROM GARDEN AND FIELD

THE SEASON'S NOVELTIES.—Philadelphia has the reputation of being slow. But the seedsmen who are doing business in that city surely seem to be up to the times. Almost all the seed catalogues which have come to my table this year thus far are from Philadelphia firms. I have already reviewed Burpee's (in last issue of FARM AND FIRESIDE), and can now speak of Maule's and Dreer's. Mr. Maule still makes a specialty of the Prizetaker onion which he introduced in 1889—just ten years ago. Mr. Burpee predicts high prices for onions this coming fall, and I infer from Mr. Maule's remarks that he holds to the same view. Both seedsmen seem to think that the supply of onion-seed may run short of the demand. Mr. Maule says that this is likely to be true especially of the Prizetaker onion. Among the season's novelties Mr. Maule offers the Extra Early Purple Advance, "a choice early purple tomato bred up from the old red Advance, superior to its parent in size, smoothness, productiveness and quality." Of course, I will have to try it. I have a selection of the old Early Advance, and if it comes up to the type of the plant from which the seed was selected last year it may prove to be a valuable early sort.

Then there is the Commercial potato, a quick-maturing, main crop variety of rare productiveness and keeping qualities. I have grown this new sort for two seasons, Mr. Maule having furnished me a tuber or two for trial in 1897. I will say that it is a potato of good quality, and a far better yielder under the conditions prevailing during the past two years than any other sort I had in the same patch, the Carmans not excepted. This potato may have a great future. Among the cabbages I notice the New Early Spring cabbage, and from the description given I think it must be something like the early variety which Mr. Francis Brill sent me for trial last spring, under the name Brill's Early if I remember correctly. This cabbage was as early as Early Jersey Wakefield, and made the hardest and heaviest heads of any sort I ever grew or saw. Head somewhat flattened. It pleased my customers more than anything

more prolific pole forms. I will have to make another trial to see whether this new "wonder" will do better than the older ones.

HONOR BRIGHT TOMATO.—Mr. Dreer also catalogues the Honor Bright tomato, of which I have spoken repeatedly in these columns, I suggesting that trials be made with it for shipment to England. The illustration gives a pretty good idea of this new type, which the Livingston's gave us last year. The following is the catalogue description, and it fits it like a glove: "The foliage is yellowish green, and the fruit grows in clusters of from three to five large tomatoes. The color when fully ripe is a rich, bright red, but during growth it makes several interesting changes in color, first light green, then an attractive waxy white, then lemon, changing to rich, bright red at maturity. It is one of the most attractive varieties grown. The quality is very fine, flesh thick and mealy, with small seed-cavities. The skin never cracks and the fruits are so solid that if picked when white they can be shipped in barrels like apples, and after a period of three to four weeks will be solid and ripened to a rich, bright red." My friend, the editor of the "New-York (former Orange County) Farmer," speaks in terms by no means flattering of this sort, and seems to consider it a curiosity. I do not agree with him, and shall plant quite largely of it. But don't plant it for an early sort. It is rather late, as the fruit requires considerable time to go through all those changes in color. I recently saw a report from London, England, saying that the shipment of tomatoes from here had not proved a success, and surely not profitable to the shipper. The fruit in most cases was allowed to get too ripe before being gathered and packed for shipment. With the Honor Bright it would be easy to avoid mistakes, as the color shows the exact stage of progress toward ripening. I think if picked when in the white stage they could be safely shipped across the water.

GOLDEN HUBBARD SQUASH.—Yellow or orange-colored Hubbards have been no rarity in our gardens. I have frequently seen them in the gardens of friends and acquaintances, and it was not always easy to trace the seed back to its original source. Dreer, Maule and others now offer the Golden Hubbard squash, and say that it

and thrives without care or coddling. This flower can be grown from seed, and if once established, is there to stay. I was greatly interested in the announcement in Dreer's catalogue of a dwarf form of this splendid flower: "It forms bushy plants twelve to fifteen inches high, and bearing its long-stemmed flowers well above the foliage. In coloring the flowers are exactly as rich and varied as those of the tall-growing sort. As the plants produce their flowers most profusely and in constant succession from June until autumn, this Gaillardia with its improved habit will prove one of the most desirable of all hardy perennials grown for cut flowers. Blooms the first year from seed if sown early."

T. GREINER.

ORCHARD AND SMALL FRUITS

CONDUCTED BY SAMUEL B. GREEN

CARE OF SEEDS OF TIMBER-TREES

SEEDS THAT RIPEN IN SPRING AND EARLY SUMMER should be gathered as soon as ripe, and with the exception of the red elm, sown within a few days or weeks, as they retain their vitality but a short time. (Red-elm seed will not grow until the following spring.) In raising seedlings of this class it is important to have land that will retain its moisture during the summer months or else that which can be conveniently irrigated, since these seeds must often be sown during very hot, dry weather, and as they cannot be covered deeply they are very liable to fail with any but the best conditions. The thousands of seedlings of cottonwood, elm and soft maple that spring up on the sand-bars along our rivers and lake shores show what are the best conditions for these seeds to germinate.

Seeds of deciduous trees that ripen in autumn may be sown to advantage in the autumn, provided (1) the soil is not of such a nature as to become too solidly packed over them before spring; (2) they are not liable to dry up or wash out, or (3) they are not subject to injuries from rodents, insects or other animals. In many locations some or all of these possible injuries may make spring sowing most desirable with most kinds of seeds. Our most successful nurserymen, however, prefer to sow in autumn and try to bring about the conditions that make it successful.

In the matter of storing these seeds it is difficult to lay down any exact rule to follow, and here, as in all other similar matters, considerable must be left to good judgment. As a rule, however, it is perfectly safe to winter over all of the seeds of hardy plants which ripen in autumn, by burying them in sand out of doors.

Tree-seeds that ripen in autumn may be divided into four classes, which require different methods of treatment to grow them; namely, dry seeds, seeds with fleshy coverings, nut-seeds and leguminous-tree seeds.

DRY SEEDS, like those of the ash, birch, hard maple and box-elder, are very certain to grow when sown in the spring in drills as soon as the soil can be easily worked, in the same way as recommended for soft maple and elm. If not sown until spring they will have to be kept over winter, and when only a small quantity is to be kept over this is best done by spreading the seed on the surface of the hard ground, covering with an inverted box and digging a ditch around it to carry off the water, or the seed may be mixed with sand and kept in a dry, cool place. Large quantities may be kept on dry ground under a shed. These seeds will stand considerable drying, but if allowed to become very dry, hot or moist their vitality may be injured or destroyed.

SEEDS WITH FLESHY COVERINGS, as those of the cherry and plum, should be kept from getting dry before planting. The best way to handle them is to separate them from the pulp, mix with moist sand out of doors, and keep them moist until planted. It is generally safe to sow such seeds in the autumn on good land, but some growers prefer to sow them in the spring. This class of seeds requires to be frozen before germinating. If allowed to get dry before being frozen they should be mixed with moist sand for a few days until plump, or they may be soaked in water, but care must be taken that they do not get water-soaked. Sometimes the dry, hard shells of such seeds seem to be water-proof. In this case, if the seeds are of special value, it is a good plan to file a hole through the shell so as to let the seed become moist. Most seeds of this class grow the first year if properly handled, but some of them, for example, the red cedar and the wild thorn, even with the best management, will remain dormant in the ground for one year before growing.

NUT-SEEDS, as those of the oak, hickory

and walnut, should be handled as recommended for seeds with fleshy coverings, but are more sensitive about being severely dried. As they do not transplant readily it is very desirable to plant them where they are to remain permanently. They should be covered about two inches deep.

SEEDS OF LEGUMINOUS TREES, as those of the black locust, honey-locust and coffee-tree, will stand severe drying for a long time and still grow provided they are treated with hot water just before planting in the spring. In this case the hot water should be poured over the seeds shortly before they are sown, and be allowed to stand until cool, when it will be found that some of the seeds have swollen up; these should be picked out and the remainder be treated again with hot water, and the process repeated until all have swollen. Seedlings of this class generally transplant readily and are managed in the same way that is here recommended for the ashes and maples.

INQUIRIES ANSWERED

Gooseberry-worm.—R. G. T., Durango, Col. The only practical remedy for the gooseberry-worm to which you refer is to gather and destroy the infested fruits as soon as they can be seen. If chickens have the run of the currant-patch they are pretty sure to gather many of the worms when they drop to the ground on leaving the berry. No insecticide has been successfully used against this pest.

Pruning—Water-sprouts.—W. J. F., Peers, Va. The best time to prune fruit-trees is during mild days in the latter part of winter before the sap starts. Light pruning may be done to good advantage in June.—Water-sprouts are generally most abundant on trees that are injured by borers or by too much pruning. If trees are kept free from borers, and are moderately or not at all pruned or injured in other ways, they seldom produce what are known as water-sprouts. Water-sprouts would not be caused by being set too deep.

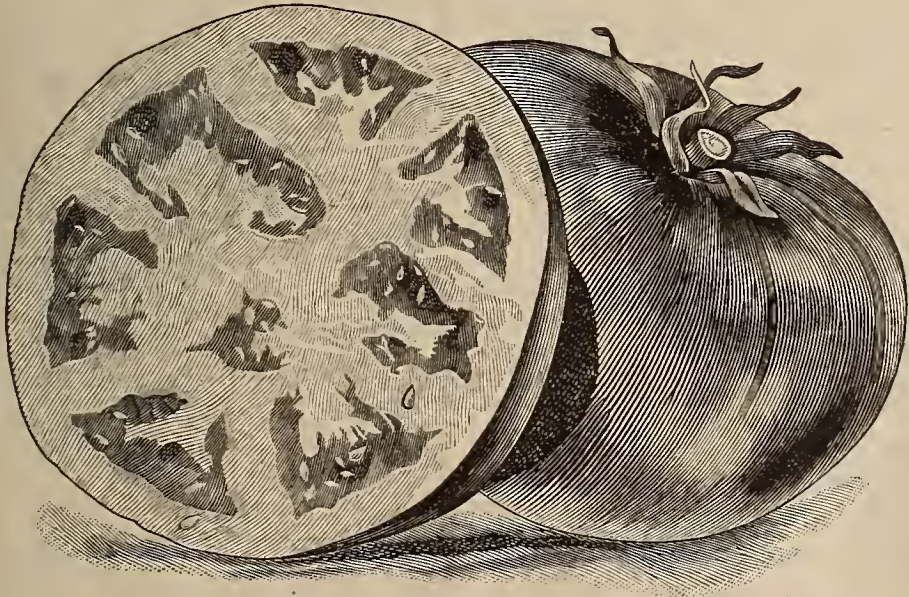
Fruit Dropping Off.—J. B. writes: "Give the best method for treating plum and pear trees to insure a crop. I have a very fine lot of plum and pear trees, but every year the fruit drops off, especially the plums."

REPLY:—There is no one method of treatment that will insure a crop of pears or plums in all locations adapted to these fruits, but each locality has peculiarities of its own. The fruit might drop from your trees for a number of causes, and I cannot intelligently answer your question until you let me know the variety of pears and plums you are trying. Are the fruits that fall off injured by insects? How many trees have you? What kind of land do they grow on? What is the method of cultivation and the condition of the trees?

White-pine Seedlings.—J. B., Liberty, Pa. White pine can be grown from the seed, and this grows in the cones. The cone itself is not a seed, but is much like a head of wheat, and contains two seeds at the base of each of its scales. The scales correspond to the chaff in the wheat. One cone may contain fifty or more seeds. The scales of the white pine remain shut down very closely over the seed until it is ripe, when they open while still on the tree, and the seeds are shaken out. After the seed falls the cones drop to the ground. In order to gather the seed the cones should be picked before their scales open; that is, about the first half of September. They may then be put in bags, in a dry place, when they will soon open, and a little jarring will knock out the seed. The seed should be kept mixed with clean sand in a dry, cold place until spring, when it should be sown on land that will not bake. As soon as the seedlings show they should be given enough shade to keep off about one half the sunlight. This is best done by putting up a frame about four feet above the plants, on which can be put brush or lath screens. What is wanted is a play of light and shadow on the bed all day, for the plants cannot stand either the full sunlight or full shade. You will see from this that the cones of last year are of no value for raising young plants.

Budding the Lemon.—L. H. W., Lynx, Ohio, writes: "Last summer I planted seeds of lemon I bought from a grocer, and now have two small plants twelve inches high. Can I have my plants budded? How old should they be? When would be the proper time of the year to have it done? Where can I get the work done?"

REPLY:—The lemon may be budded either with the lemon or with the orange, but it is not often a beginner is successful in so doing. You will probably find some gardener who can do this work for you. In almost every town of considerable size there is a greenhouse collection of plants, amongst which will be some free-flowering orange or lemon from which buds may be obtained for budding, and very likely the one in charge will do the work for you at a small charge. It is customary to cut the seedlings back severely and then insert the buds in the new growth after the wood is about half ripe but still growing freely. If your plants are growing freely now they might be budded at once, but if they need cutting back first they might not be in shape to bud before the first of May. The orange is much longer-lived, hardier and much better adapted for house culture than the lemon, and lemons are generally budded on orange to increase their hardiness even in commercial culture of them. Of all the citrus fruits probably the Otaheite orange is best adapted to house culture, since it flowers and fruits abundantly every year.



HONOR BRIGHT TOMATO

else I had to offer in cabbages at that time. It must be disposed of promptly, as it is liable to crack if left in the field after reaching full size, especially when rains are frequent.

NEW BUSH LIMAS.—Henry Dreer's catalogue has an exceedingly gay cover, and a very complete inside, even if colored plates are lacking. Like Maule's, it offers the Early Spring cabbage as one that all gardeners should try. Most of my readers, no doubt, are acquainted with Dreer's Pole Lima, and know it to be a most excellent sort, perhaps the best of all in quality. The first Bush Lima introduced by any seedsmen was a bush form of Dreer's Lima bean, which under the name of Kumerle, however, had only a short existence. Then Dreer's Bush Lima, which is either identical with the Kumerle, or very much like it, was introduced. In Dreer's catalogue now before me I find Dreer's New Wonder Bush Lima, offered as "the peer of Bush Limas—earliest and the only one that does not throw out runners." Thus far I have not been entirely satisfied with any of the Bush Limas, and I have about given up growing them because I found it easier to grow the

matures earlier than the green-skinned Hubbard, and is more productive. I don't remember ever having grown this orange sport, and do not know how it compares in quality with the other. I grew quite a lot of ordinary Hubbards the past season, and they all were very fine, cooking dry and mealy. Last year, however, and the year before my Hubbards grown from the same seed, or from seed obtained from the same source, were watery, soggy things—hardly fit for table use. It seems to me that the quality of the squash hinges largely on season and stage of maturity. When the summer is warm, and the squashes get fully ripe, they are dry and mealy; otherwise not. But Hubbards are the very best of our winter squashes, and seldom fail to be profitable.

THE GAILLARDIAS.—During recent summers I have never been able to pass one of the borders in my lawn, which contains a plant of the Gaillardia (Gaillardia grandiflora), without stopping at least a moment to admire the beautifully colored flowers borne in such abundance. It is one of the handsomest and most satisfactory of perennials,

AGRICULTURAL SCHOOLS

(CONTINUED FROM PAGE 3)

ing and curing meats, plant propagation, forestry, soils and fertilizers, feeding, breeding, agricultural dairy and domestic chemistry, botany, physics, zoology and entomology, poultry-keeping, farm blacksmithing, farm carpentry, drawing, sewing, cooking, laundering, social culture, home management, farm bookkeeping, physical culture, vocal music, plane geometry, civics, algebra, English, military drill and domestic hygiene. Sewing, cooking, home management, laundering and social culture are taken by the girls instead of blacksmithing and carpentry. Physical culture is required by all students. Before graduation each student must have had a practical experience in field-work for at least one season.

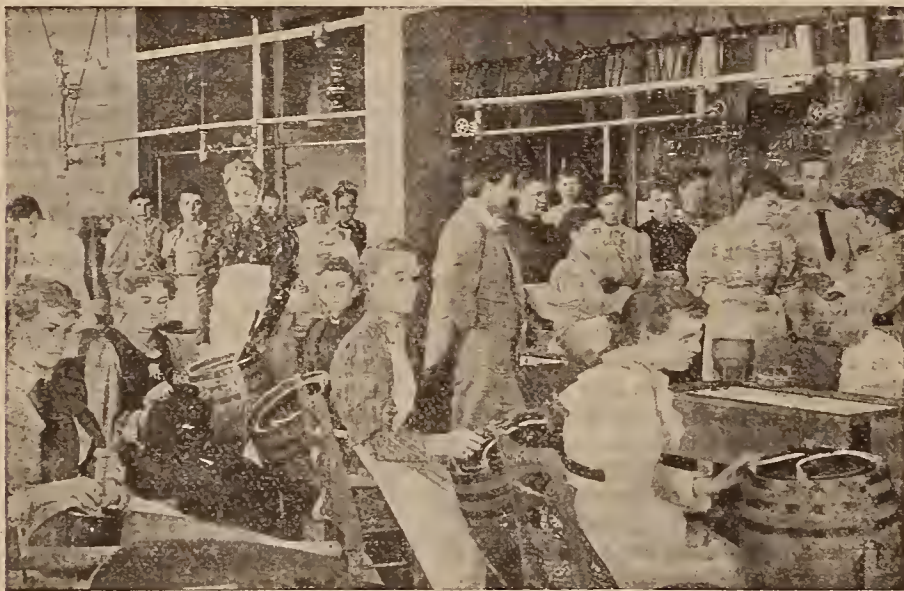
On looking over the list of subjects taught there will be found several that are quite new and which indicate a departure from ordinary educational lines. For instance, the subject of cutting and curing meats was started on account of the general lack of information among farmers as to the proper way to dress the meat needed for home use, and to encourage neighborhood co-operation in raising and using home-grown meats. This division also prepares the meat for the school dining-hall. Every effort is made to

added much to the social life of the school, and is a feature having so much to recommend it that it has evidently come to stay. About sixty girls attended last season.

The Minnesota College of Agriculture requires for entrance the studies taught in the agricultural high school, is intended for educating teachers, and it is not expected that many will enter it. At present there are eighteen students in attendance.

DAIRY SCHOOL

Besides its agricultural high school and college Minnesota has a most excellent dairy school, modeled on much the same lines as those of other northern states. It aims to furnish persons actually engaged in the manufacture of butter and cheese, or those who purpose to take up this work, an opportunity to become skilled in their work, and to study the many problems which have a direct bearing upon dairy industry. Its session is for four weeks in the month of January, during which time about one and one half tons of milk are daily used in the manufacture of butter and cheese. About one hundred have attended each session of this school for the past two years. The expense of attending this course is about \$32, which includes a registration fee of \$15. Dairy certificates are granted to students who have attended the course, passed a



SPECIAL CLASS IN HOME DAIRYING

teach the subjects from the standpoint of the tiller of the soil: so blacksmithing and carpentry are taught with special reference to their bearing on the problems of the farm, and the exercises consist in making whiffletrees and the irons for them, cold-chisels, wagon-jacks, clevises, chains, etc. In drawing, the exercises given most attention are plans of barns, houses, farm machinery, plots of farms, etc. In botany, the botany of our farm and garden crops is made most prominent, and in physics the illustrations are preferably taken from agricultural conditions. In fact, the aim has been to make the course of study brimful of the kind of instruction that will be most helpful to the students when they take up the cultivation of the soil, and to show them the possibilities of the surroundings of the agriculturist, for many a boy leaves the farm because he does not appreciate its opportunities.

EQUIPMENT—EXPENSES

The state of Minnesota has furnished a fine establishment for carrying on this work, and has put about \$350,000 into buildings and their equipment. The dairy building is probably the finest in this country. It contains butter, cheese and other class-rooms, laboratories for testing milk, offices, a very nice live-stock lecture-room in which can be seated two hundred people, and in which is a large platform, onto which the stock under discussion is brought for illustration and study. Expenses are kept down to the lowest possible figure; board and washing are furnished at cost, text-books at a rental of \$2 a year, and the total expenses for one school year need not exceed \$85 for each student, including even heating and lighting of the rooms. Good dormitories are furnished, and an excellent library and reading-room are always ready for use. The students have excellent literary societies, a good orchestra and band, a good gymnasium and basket-ball team. Three hundred and sixty students attended last year.

CO-EDUCATION

Until 1897 girls were not admitted to the same courses as the boys, but a short course was provided for them in summer. In that year a special home building and dormitory was provided, and for nearly two years they have attended classes with the boys, and the results of this plan have been very pleasant. It has conducted to good order and gentlemanly conduct among the boys, and has

satisfactory examination, and in addition have demonstrated by a year's work in a factory that they are skilled in the art of butter and cheese making, and are qualified to manage a creamery or cheese-factory.

FACULTY

The state of Minnesota has been wise in its choice of faculty for its agricultural department, which consists of twenty members, eight of whom are connected with the experiment station as well as the school and college of agriculture. It has been divided into field agriculture, animal husbandry and dairy husbandry, each of which is presided over by an able specialist.

SUCCESS OF AGRICULTURAL HIGH SCHOOL

The total attendance in the whole agricultural department in Minnesota last year was 483. The success of the system here described seems to show that the best part of the agricultural instruction now given in our agricultural colleges can be readily acquired by students of the high-school grade; that it is a mistake to require a college-entrance examination of those who wish to gain a good working knowledge of scientific agriculture; that the colleges of agriculture should confine themselves to educating teachers of agriculture and kindred sciences; that few will attend agricultural colleges, and they should not be expected to educate the mass of farmers and gardeners; that the farmers of this country are willing to patronize agricultural schools as soon as they are made helpful and are put within their reach. The common statement that the boy is most apt to follow the pursuit with which he is most familiar is here exemplified by about ninety-seven per cent of those who have attended the school of agriculture being found on farms or in occupations closely connected with farm life. It is shown, too, that it is entirely practicable to hold such a school during the winter months, when the boys can most easily be spared from the farm, and that while the benefits of field-work are not fully available in winter, yet with suitable greenhouses and illustrations this difficulty can be largely overcome, and is more than outweighed by the advantage of holding the session at a time when the sons of farmers can attend.

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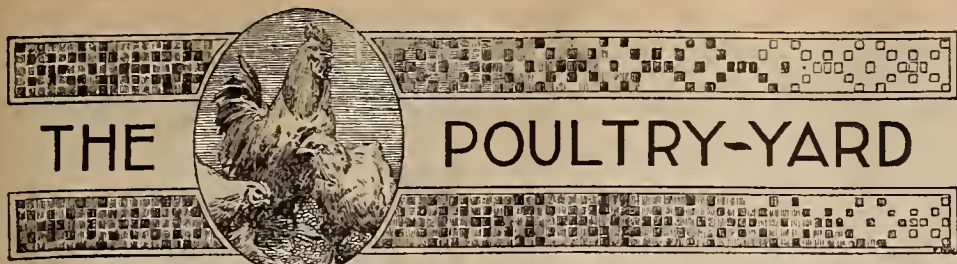
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THE POULTRY-YARD

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LIME FOR THE SHELLS

THE gizzard is competent to render very fine the hardest material, but to do this it must be assisted by gravel, shells, sand or other sharp-cutting material. These materials may pass out of the system unless dissolved, which can be done by vegetable acids that separate the primitive elements of the various forms of lime. Bones are phosphate of lime, but egg-shells, chalk, limestone and oyster-shells are carbonate of lime. They are insoluble in water, and cannot be appropriated by the hen until they are entirely changed in chemical composition by some substance that unites with them. Plaster is soluble, but may prove injurious if used freely. The best way to feed lime is in the grains, such as wheat, oats, buckwheat and barley. Clover hay is rich in lime, and so are peas and beans. The action of mineral substances is mostly mechanical, but while they may be insufficient, so far as providing lime is concerned, yet it is only a theory, and they are really more useful as grit. Many persons have provided their hens with all the oyster-shells required, and yet they laid soft-shell eggs. It can be considered, however, that the difficulty may be weakness of the egg-making machinery. An egg traverses quite a distance before it is surrounded by the shell, and hens are subject to many disorders. Overfat hens, inbred hens and sickly hens are those usually affected.

POINTS ON TESTING EGGS

To test eggs look at them through a strong light. See that they are perfectly clear, with not a dark spot through them. A good way to distinguish a fresh egg is by the air-bubble in the large end. The smaller the air-bubble the fresher the egg. A fresh egg must be closely examined to see the air-bubble. Hold it up to an egg-tester, turn it around slowly, and look close near the top of the large end. If the bubble looks large, say one quarter of an inch deep, it should not be used. Get a fresh egg, newly laid, and make yourself familiar with the position and size of the air-bubble. You can then always distinguish a fresh egg, as the bubble becomes larger and larger every day. A fresh egg has a somewhat rough shell, while the shell of a stale egg is very smooth. When cooked the contents of a fresh egg sticks to the shell, and must be removed with a spoon, but a stale egg, when boiled hard, permits the shell to be peeled off like the skin of an orange. It takes a longer time to boil a fresh egg than it does for a stale egg, and fresh eggs are more easily beaten to a froth than stale ones. You cannot, however, distinguish a fertile egg until after it has been under a hen a week, though experts can do so after the fourth day.

WHAT TO SELL

During this season the room in the poultry-house is worth something, and the inferior birds simply keep the others back. If there are many puny males they might as well be sold now as any other time, for they will not be worth a cent more in the future. In fact, the larger a cockerel becomes the less it will be worth, for just as soon as the comb becomes developed it goes into the market as an "old rooster," and brings less than five cents a pound. Cull out the fat hens also, for they bring the best prices and will not lay, and if there are any young pullets that are behind in growth, let them go, too, and cull the flock down to "normal." It is not economical to feed two birds when only one is giving a profit.

HATCHING EARLY

The best hens for bringing out chickens are those that are of a quiet disposition. Some varieties will not sit for the purpose at all, such as Leghorns, Spanish and Houdans. In a domestic state, however, such varieties seldom get broody, which compels people who wish to breed from them to keep a few fowls of another kind to hatch their eggs. March, April and May are the best months to hatch chickens, but eggs may be set even in the warm months by those who have houses and wish to have well-grown chicks in summer for the fall market. The risk of

losing the young broods, however, from lice is great, and the extra care and attention they require may not in ordinary seasons repay the trouble of rearing them. Some varieties can be very successfully reared late, owing to the rapidity with which they grow to maturity. Leghorns are perhaps the fastest growers, often beginning to lay before they are four months old. If an increase of eggs is desired in the poultry-yard before large sums of money are expended in the purchase of good layers the pullet should be hatched early.

FATTENING FOR MARKET

The first essential in fattening fowls is to give more food, and this should be done three times a day until about ten days before the fowls are to be marketed. Bear in mind that you cannot fatten a turkey if you confine it in a coop alone. It will worry and lose flesh instead of gaining, as it prefers association with others. Feed the flock on a variety, giving corn and wheat morning and night, at noon allowing a meal of cut bone and meat. The turkeys will be in fairly good condition by the time they are to be penned, which should be about ten days before killing. Put them in a small yard, having four or five together, and give as much as they can eat at a meal. After they are penned let the morning meal consist of two parts corn-meal, two parts ground oats and one part ground meat. A little crude tallow added will be an advantage, also a tablespoonful of linseed-meal for each bird. At noon give wheat, and at night whole corn. Do not forget grit, water and scalded cut clover hay.

EXTRACTS FROM CORRESPONDENCE

A ROUP CURE.—I notice this spoken of in your issue of November 15th under the title of "Heads Swelling," and the advice given was to make an end of the afflicted fowls. Now, in such cases, provided the birds were otherwise in good condition, rather than to kill I would first make an effort to save them by cleaning the poultry-house thoroughly (a thing that ought to be done anyhow), sprinkling its interior well with carbolic acid, and having fastened the fowls in place in their drinking-fountain turpentine at the rate of one teaspoonful to every gallon of water. They will probably not partake of it much the first day, but the second they will use it freely, and especially if nothing else is given them to drink. Simply put in fresh water every morning, add a little more of the turpentine daily, until it is ultimately increased to a tablespoonful instead of a teaspoonful, and feed only soft food. Make also an ointment in the proportion of two tablespoonfuls of lard to one of the turpentine; grease the head and throat of each fowl with it, and make it swallow a good-sized pill of the same. Rub its throat outside, and swab it inside with coal-tar. Repeat this process of treatment every morning for ten days or more, and if the poultry then are not singing and cackling as gaily as ever, and showing signs of laying, the sooner they are dispatched and burned the better. F. O. S.
Cooperstown, N. Y.

INQUIRIES ANSWERED

Weights of Broilers.—A. E. F., Lima, Ohio, writes: "What is the best time allowed for a chick to reach two-pounds' weight in winter?"

REPLY:—With warmth and good management chicks of the large breeds can be made to reach two pounds when ten weeks old.

Layers.—W. B., Mendon, Utah, writes: "Which is the best kind of fowls to lay to obtain winter eggs? Is it best to keep more than one male?"

REPLY:—For a cold climate the Light Brahmas rank high, but the number of eggs laid depends more on the food and care than on the breed. Warm quarters in winter induces all hens to lay. One male with fifteen females is a fair proportion.

Number of Males.—E. S. S., Milford Square, Pa., writes: "Where hens do not have free range, is one cockerel sufficient with twenty-eight hens (Plymouth Rocks)? Would the eggs be fertile, or should two males be kept?"

REPLY:—Much depends on how many of the hens are laying. Good results have been obtained from only one male with fifty hens, but the rule is one male with twelve or fifteen hens.

Leg Weakness.—Mrs. E. F. White, writes: "I have a warm hen-house, well lined with tarred paper. I feed mostly buckwheat in the morning and corn at night. One of my largest hens has lost the use of her legs."

REPLY:—It is probably caused by an exclusive grain diet, the hen being fat. Remove her from the flock, and keep her on straw, no roost, as heavy hens are sometimes injured by jumping from the roost. Give less grain, and vary with meat and cut clover, scalded.

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QUERIES

READ THIS NOTICE

Questions from regular subscribers of FARM AND FIRESIDE relating to matters of general interest will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should inclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Wintering Brussels Sprouts.—C. D., Suffolk county, N. Y., writes: "Kindly tell how to take care of Brussels sprouts in winter as to situation and covering, and best kind to raise."

REPLY BY T. GREINER:—Brussels sprouts is a member of the cabbage family and requires somewhat similar treatment. Sow the seed (as commonly sold by seedmen) rather early, set the plants rather closer than cabbage, and give same culture. Pull the plants in the fall and store in any place for storing cabbage.

Worm on Egg-plant.—Mrs. J. D., Attica, Kan., writes: "Last year a little green insect ate all the flesh part off the leaves of my egg-plant, leaving the thin rib part of the leaves. What is the remedy?"

REPLY BY T. GREINER:—All leaf-eaters are easily destroyed by poisonous applications. Use a little Paris green (in the Bordeaux mixture) if you spray the egg-plants for blight, as I do, or in water with a little lime if you do not practise spraying, and sprinkle all over the foliage of the egg-plants.

Wild Parsnip.—Rosa P., Knox county, Ind., writes: "A year ago I bought some parsnip-seed from an Ohio seed-house. The parsnips came up all right and grew wonderfully, but a lot of them ran up to seed. My neighbors warned me not to eat them for fear they might be wild parsnips, and poisonous. What do you think about it?"

REPLY BY T. GREINER:—The "wild" parsnip is probably the cultivated kind that has escaped and is growing in fence corners and roadsides. I do not believe that the root is poisonous if grown in healthy surroundings (drained land). In cultivating we often find plants among parsnips, carrots, beets, celery, etc., that will bolt—that is, run to seed the first year, although these plants are biennials, and should go to seed only the second year. Such plants are more liable to go to seed if seed is sown very early in spring or during winter under glass. The parsnips of the inquirer that have good roots and have not gone to seed may be eaten without fear.

VETERINARY

CONDUCTED BY DR. H. J. DETMERS

To regular subscribers of the FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Veterinary queries should be sent directly to DR. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE:—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered.

Vitiated Appetite.—M. R., Hainsville, N. Y. Please consult answer given under above heading to J. D. C., Constantia Centre, N. Y., in FARM AND FIRESIDE of January 15th.

Too Indifferent.—J. C. S., Crabbottom, Va. If your sow is too indifferent to the male, and does not care for him, keep both sow and boar for some time together in the same inclosure.

Probably So-called Ringworm.—M. A. P., DeHaven, Pa., and A. W. P., Novelty, Wash. Please consult answer given under above heading in FARM AND FIRESIDE of January 15th.

Botriomycosis.—O. R., Cordova, Md. Please consult the answers given under above heading to E. F. L., Sedro, Wash., in FARM AND FIRESIDE of December 15th, and to H. C. M., Junction City, Ohio, in the issue of December 1, 1898.

So-called Big-head.—C. T., Passadena, Fla. Your question has been answered in FARM AND FIRESIDE of January 15th under the heading, "Possibly Actinomycosis." Your latest communication simply strengthens my diagnosis, and nothing needs to be added.

Feeding Sulphur.—M. A. B., Scott City, Kan. I do not see why you should wish to feed sulphur to your cattle. As a rule medicine or chemicals given to healthy animals, or to animals in cases of sickness in which they are not indicated, cause more or less injury.

Small Sores(?).—T. J. T., Salmon, Idaho. I really do not understand what "the small sores something like boils," which you found in various places of your butchered pig, and of which you further say, "Some of them, especially under the shoulder, ran quite deep, and others (in other places) could be scraped off," may be, unless they are cyst-worms, possibly those known as cysticercus cellulosa, which constitute the larvae of the human tapeworm, taenia solium. If this is the case the lard may be fried out, and even the meat, if the cysts are all removed and the meat is cooked or fried, may be used without danger as human food. I advise you to send a few of the "small sores" to your agricultural college for microscopic examination, which undoubtedly will be made free of charge.

Death of a Stallion.—L. K. W., Belmont, Tenn. I cannot give you any information concerning the cause of the death of your draft-stallion. Don't you consider it asking a little too much to ask without any remuneration for both a chemical and bacteriological analysis of some putrid material, analyses for which, if made in a reliable way, any chemist and any bacteriologist would each have to charge not less than \$50.00. If there are more cases like yours your state veterinarian and your state experiment station are the parties to apply to for an investigation.

Weak Eyes.—J. W. B., Newburg, Fla. If the opacity of the eyes of your horse is in the anterior chamber of the eye, and not on the surface of the cornea, which you can easily decide if you turn your horse around in the stable so that the same will face the opened stable door, and you then look from the side through the eye, and if the attacks come on periodically—that is, if at times an improvement, and at other times a worse condition getting worse can be observed—the disease is periodical ophthalmia, will terminate in blindness, and must be considered as incurable.

Swine-plague.—J. A. R., Republic, Mo. What you describe are cases of veritable swine-plague (so-called hog-cholera), a disease which, though having its most frequent seat in the lungs, may attack any part and organ of the animal body. As soon as the last ones are dead thoroughly clean and disinfect your premises and expose everything possibly infected to all the sunlight and fresh air you can before you procure a new lot of swine, and particularly remove and destroy all old straw, corn-cobs, manure, etc., for if you do not the dying will begin anew as soon as you get other hogs.

String-halt.—E. J. W., Joliet, Mont. Genuine string-halt, especially if of long standing, is practically incurable. All kinds of remedies, particularly several surgical operations consisting in performing tenotomy on various muscles, operations, however, which can be executed only by a competent veterinarian, have met, on the whole, with very indifferent success. External applications of salves and ointments have effected no improvement whatever. In some cases, but in some cases only, an exemption for a long time from all kinds of work has resulted in change for the better.

Soft Shoulders.—E. S. G., Dundee, Oreg. It may be that your horse, which you say is very fat, is unaccustomed to work, and has on that account, soft shoulders, the same as a man not used to work has soft hands; but it strikes me that your case is much more one of an ill-fitting collar than of soft shoulders. Procure a well-fitting collar, and throw away all kinds of pads, which only serve to concentrate the pressure on the very points which need relief. It is also very essential to keep the collar, at least at all places which come in contact with the horse, scrupulously clean and smooth. If your horse is unaccustomed to work, the work should be light at first and increased gradually, and the working hours should be short and gradually lengthened, so as to get the horse accustomed to the work required.

Several Questions.—J. F. M., Tillamook, Oreg. (1) I cannot advocate any in-and-in breeding, particularly not in milk-cows in which the constitution has already been weakened by an extraordinary development of the milking qualities, and in which the predisposition to the tuberculosis is already alarmingly great. (2) Your second question I cannot answer. (3) Hair makes its appearance on a bovine fetus between the twenty-first and twenty-second week of gestation. If a fetus is born before, or ahead, of the proper time, but after it has become coated with hair, it is not called an abortion, but simply a premature birth. (4) There is not. (5) Your fifth question is out of my line. Keep an account with your cows and you can answer it yourself.

Laps the Water Like a Dog.—G. C. H., Little Rock, Ark. You say, "My cow in drinking laps the water cat or dog fashion for several moments before finally drinking, and generally turns the water-vessel over before she gets any." There are several possibilities: (1) It may only be a bad habit, which is the more probable, as you say further on, "Otherwise she is perfectly healthy;" (2) it may possibly be a nervous derangement, having its seat either in the brain or in the nerves of the tongue, and (3) there may possibly be some morbid growth or change in the pharyngeal region, interfering somewhat with the process of swallowing. Still, if one of these last-named possibilities existed there would very likely also be some other symptoms besides the one you have mentioned.

Offensive Discharges from the Nose.—G. P., Bickleton, Wash. It is utterly impossible to determine the nature of the disease of your mare by the simple fact that the same has had for six months an offensive discharge from the nose, which discharge is sometimes, for a week or two, rather copious, and then, for the same length of time, but slight or even absent. Such a discharge may come from various sources, so, for instance, from the maxillary or frontal sinuses, or anywhere from the respiratory passages. Only the offensiveness may be taken as an indication that somewhere a destruction of either bone or cartilage tissue is going on, but whether the cause consists in an existing tooth-fistula opening into a maxillary sinus, some existing morbid growth or other morbid process affecting bone or cartilage, or even glanders causing a destruction of, for instance, the cartilaginous septum of the nose does not proceed from your meager description, and must be determined by a thorough examination conducted by a veterinarian. As there is a possibility that the disease may be glanders (I do not say that it is) it may be advisable to notify the state veterinarian.

Retention of Afterbirth.—M. H. P., Spring Lake, N. Y. A retention of the afterbirth is quite common in cows in cases of premature birth. If your cow has suffered from such a retention already three times in succession an existence of some, perhaps slight, organic changes, just sufficient to cause an abnormal adhesion between the placentas, or to prevent a prompt and timely expulsion, must be presumed, and in such a case measures of prevention are out of the question. If the afterbirth of your cow is not expelled within three days after the birth of the calf it may be advisable to inject once a day into the uterus of the animal a quart or more of a blood-warm solution of creolin in water, in the proportion of one part of the former to one hundred parts of the latter, and to continue this until the afterbirth has come off. To remove the latter by hand is all right, provided it is done in a proper, careful and skillful manner, but if not, considerable and even lasting damage may result.

One-sided Bloody Discharge from the Nose.—H. H., Oswego, Kan. The one-sidedness, the bloody and purulent character of the discharge, the admixture of destroyed tissue to the same—you speak of corruption—the accumulation of the discharge at some place, the relief of the cow when it is dislodged and expelled by forcible blowing, and the bleeding that follows, point toward the existence of a morbid growth somewhere in the right nasal cavity, but it is also not at all impossible that you have to deal with a case of tuberculosis, a disease which in cattle has frequently its first and most prominent seat in the retropharyngeal and other lymphatic glands, which, when broken, may possibly discharge their tuberculous contents through but one nasal cavity. I therefore advise you to have your cow examined by a competent veterinarian, and if his examination should not have a definite result, to inform your state veterinarian.

Brittle Hoofs.—L. G. H., Union, Mich. If the hoofs of your horse are so very brittle that "pieces chip off where the nails are driven," several causes, it seems, must have been acting to make them so; and these causes must be removed or he prevented from acting before any improvement can be effected. Unless the horse has been foundered and has puniced hoofs, which, of course, is a different thing altogether, there is hardly any doubt but that the hoofs in the first place were made brittle by too much and too frequent softening by an absorption of moisture, each time followed by a drying out in consequence of a rapid evaporation of the absorbed moisture. It is not very material whether the softening was brought about by too much and too frequent exposure in water, soft mud and manure, or was the result of frequent "stoppings," while the following drying-out process undoubtedly was hastened by a too extensive use of the rasp on the external surface of the wall of the hoof each time when the horse was shod, and thus depriving the horn of the hoof of its natural protection against too much absorption of water, as well as against a too rapid evaporation of moisture. The horn of the hoof will also be made brittle if in shoeing the horn is heated by fitting on the shoes while hot. If this is done, the first effect will be to soften the horn, but soon after it will be dry, dead and brittle. All these artificial softening of the horn by external means take the life out of the same, make it dead born, and the alternating expansion and contraction necessarily reduces its firmness and even severs the continuity and makes it brittle. The moisture required to preserve the elasticity and the firmness of the hoof-horn must come from within, from the blood, the source of nutrition of all animal tissues, and moisture introduced from any other source, from without especially, if absorbed in excessive quantities, interferes with the normal process of nutrition from within, expands the horn in a mechanical way, and as it is soon lost again the expansion is invariably followed by contraction. Only in cases in which congestion or a process of inflammation (a morbidly increased process of nutrition) is existing inside of the hoof a cooling off of the outside of the same by applications of moisture for the purpose of reducing the existing congestion and inflammation (or abnormal supply with blood and the morbidly increased process of nutrition) is indicated and, for the time being, beneficial, but in all other cases it is injurious. My advice to you is as follows: (1) Avoid as much as possible any continued exposure of the feet of your horse to water, mud and manure. (2) Have his shoes reset once every four weeks. (3) Let the horseshoer fit the shoes to the foot and not the hoof to the shoe; the fitting, in other words, should be done on the anvil and not with the knife and the rasp, instruments to be used only to put the hoof into a proper shape, and after this has been done all the fitting must be done at the anvil. (4) Do not permit the horseshoer to bring the shoe while hot into any contact with the hoof. (5) Insist upon the horseshoer making the nail-holes in the shoe at such places at which the hoof has sufficient strength, and not where the nail-holes have been made in the factory, even if he has to make shoes especially for your horse. (6) Have only light shoes put on. (7) Insist upon the horseshoer using the thinnest nails he has, and as few as will suffice to hold the shoe, and these only at such places at which there is sufficient horn to hold. Any unnecessary nail is injurious. (8) Do not permit any use of the rasp on the external surface of the wall of the hoof anywhere above the nail-holes. (9) If a shoe should in the least get loose inside of a month have it reset at once. (10) If your horse comes home with muddy feet have them cleaned as soon as possible. (11) If your horseshoer knows how to handle and to apply it, have at each shoeing the broken-away pieces of horn replaced with Defay's artificial horn, composed of gutta-percha, two parts, and gummi ammoniacum, one part. If this is properly applied it will be strong enough to hold nails.



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OUR SUNDAY AFTERNOON

THE ANGEL OF PATIENCE

To weary hearts, to mourning homes,
God's meekest angel gently comes;
No power has he to banish pain,
Or give us back our lost again;
And yet, in tenderest love, our dear
And Heavenly Father sends him here.

There's quiet in that angel's glance,
There's rest in his still countenance!
He mocks no grief with idle cheer,
Nor wounds with words the mourner's ear;
But ills and woes he may not cure
He kindly trains us to endure.

Angel of patience! sent to calm
Our feverish brows with cooling balm,
To lay the storms of hope and fear,
And reconcile life's smile and tear.
The throbs of wounded grief to still,
And make our own our Father's will!

Oh, thou who mournest on thy way,
With longings for the close of day,
He who walks with thee, that angel kind,
And gently whispers, "Be resigned;
Bear up, bear on, the end shall tell,
The dear Lord ordereth all things well!"

—Whittier.

KNOWING YOUR BIBLES

THE good old custom of "learning by heart" has fallen out of use in our families and Sunday-schools, and passages of the Bible are no longer memorized by the rising generation. But we should at least be able to find a passage, even if we cannot recite it. Here is a list of passages whose locations should be familiar to every Christian:

The Lord's Prayer—Matthew vi.
The Commandments—Exodus xx.
The Beatitudes—Matthew v.
Paul's Conversion—Acts ix.
Christ's Great Prayer—John xvii.
The Prodigal Son—Luke xv.
The Ten Virgins—Matthew xxv.
Parable of the Talents—Matthew xxv.
Abiding Chapter—John xv.
Resurrection Chapter—I. Corinthians xv.
Shepherd Chapter—John x.
Love Chapter—I. Corinthians xiii.
Tongue Chapter—James iii.
Armor Chapter—Ephesians vi.
Traveler's Psalm—Psalm cxxi.
Bible Study Psalm—Psalm exix.
Greatest Verse—John iii. 16.
Great Invitation—Revelation xxii. 17;
Isaiah lv. 1.
Rest Verse—Matthew xi. 28.
Worker's Verse—II. Timothy ii. 15.
Another Worker's Verse—Psalm cxxvi. 6.
How To Be Saved—Acts xvi. 31.
Should I Confess Christ?—Romans x. 9.
Teacher's Verse—Daniel xii. 3.
The Great Commission—Mark xvi. 15.
Christ's Last Command—Acts i. 8.—Christian Uplook.

THE DIFFERENCE

A stranger in Boston, I paused for a moment after service at the door of one of the city churches to look about at the wonderful carving and the beautiful stained-glass windows. As I stood there my eye fell upon a plain little woman who was venturing to speak to a richly dressed dame whom she had met face to face in the aisle. I noted that there was no response. The would-be grand dame simply drew her furs more closely about her and sailed majestically on, her chin in the air. The little woman flushed, her lips trembled. At this moment a hand grasped her hand warmly, while a sweet voice said, "Mrs. Jenkins, how glad I am to see you!" The speaker was Mrs. Julia Ward Howe, the author of the famous "Battle Hymn of the Republic," a woman honored and revered throughout the civilized world.

The little woman looked up. Her face seemed metamorphosed. Those few words had changed the aspect of the whole world to her. Some one did care to speak to her, some one was glad to see her!

As I turned homeward I pondered upon what I had just seen; and I felt that perhaps there was no better illustration of the difference between the truly great and the would-be great.—Sunday-school Times.

LETTERS AND THE BLUES

To write a letter when one is suffering from a fit of the blues, from temporary or chronic depression, thus sending forth one's melancholy to become the chilly, wet blanket which can smother another's happiness, is equally short-sighted. Out comes the bright sunshine, and your clouds vanish; but your

darkly and wretchedly conceived letter has gone beyond your reach, and you cannot recall it, and it is busy about its baleful errand when you are in no frame of mind to own that you sent it out. Years afterward it may fall into the hands of your heirs, and may lay at your door the charge of a tendency to insanity, or be quoted in evidence of your spiritual or mental weakness and infelicity. Refrain from writing letters when you are in a low mood.

Another point, and this has to do with the letters of well-known people. What right has the public to the intimate knowledge, the unveiling, the revelation caused by the publication of letters when the helpless dead can lift no hand for their own defense or protection. Much as we enjoy biography, there often comes over us a creepy feeling, a sort of shiver, at the thought that those who wrote these private personal letters never intended them for the perusal of other eyes than those of the one to whom they were addressed. Famous men and women should take precaution during their lifetime against this invasion of their individual rights when they are no longer here.—Harper's Bazar.

ANOTHER SHOT AT THE CIGARETTE

A prominent railroad man is the latest to throw down the gage of battle to the cigarette. He is a general freight agent on a large railroad, and employs many young men as clerks. He has announced that in the future he will not employ any young men who are addicted to the cigarette habit, and, further than this, he expressed his intention of getting rid of all the cigarette fiends now working in his department. He gives the following as his reasons for this decision: "Among the two hundred in my service thirty-two are cigarette fiends. Eighty-five per cent of the mistakes occurring in the office are traceable to the thirty-two smokers. They fall behind with their work, and when transferred to other desks which men who do not smoke handle easily, they immediately get along just as badly, showing that it is not the amount of work, but the inability or indolence of the performer. The smokers average 'two days off' from work per month, while the non-smokers average only one half of a day in the same time. The natural conclusion is that the thirty-two young men are holding positions deserved by better men."—Michigan School Moderator.

CUBIC CHOICE

Our choice in life must be cubic choice. It must have three dimensions. First, it must be very high—as high as I can reach my life. Next, it must be very broad, covering all the powers of my life—mind, voice, hands, feet. And then it must be very long—run out seventy years, if that be the sum of my days on earth. I cannot afford to swap horses in the middle of the stream. I cannot afford to change my choice at thirty or forty. We are to make our choice the highest, the broadest, and the longest possible. This is to be our aim, that the life of Christ in us shall be and do what the life of Christ was and did in himself. We are so to live that our life shall repeat the life of Jesus of Nazareth.—Alexander McKenzie, D.D.

THE RESTRAINT OF RELIGION

We should all like to have God's sanction for our actions. But there are a great many of us that will not take the only way to secure that; namely, to do the actions which he commands, and to abstain from those which he forbids. Popular Christianity is a very easy-fitting garment; it is like an old shoe that you can slip off and on without any difficulty. But a religion which does not put up a strong barrier between you and many of your inclinations is not worth anything.—A. Maclaren, D.D.

TALK LESS, DO MORE

If each man would look about him and do what he could to help the few near to him there would be no starving poor among us. If one tenth of the energy we waste on windy sentiment were applied to the doing of the individual duty there would be no need to shout for somebody else to give somebody else a living wage. If each man took his work in his hands and voted and shouted a little less the world would be more what God meant it to be.—Jerome.



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TEACHING CHILDREN HOW TO SEW

HAWTHORNE, in his romance, "The Marble Faun," makes the finding of Miriam in her studio, engaged in her task of mending a pair of gloves, an event around which to cluster his thoughts on what is termed by one "the ministry of the needle," making much of this pleasant and touching peculiarity which distinguishes women from men. The polished instrument used is made by him to serve as an electric line along which runs a "vast deal of human sympathy," extending from the throne of the queen to the wicker chair of the humblest seamstress, uniting all by a common bond. "Methinks," said he, "that it is an indication of healthy and gentle characteristics when women of high thoughts and accomplishments love to sew, especially as they are never so much at home with their own hearts as while so occupied."

One might be led to think, however, from the tenor of the writer's thoughts, that needlework is simply a pastime, or as expressed, "a by-play aside from the main business of life," a "pleasing exercise" which fills the "tiny gaps of vacant moments." While we may agree with the writer on some points, we would differ from him in others, realizing, as we do, that the use of the needle is, for the most part, a necessity instead of "a by-play;" knowing, too, that the vacant moments with many are of rare occurrence.

Willingly, however, we admit the vein of truth running throughout the whole, that one skilled in the use of the needle has acquired an accomplishment much to be desired by her less fortunate sisters, who realize that the attainment is one not to be lightly esteemed, and know, too, that years of patient effort are necessary before one can become a skillful needlewoman.

In the earlier half of this century the young woman would have been made to feel herself disgraced had she by any means neglected to add year by year to her store of quilts and linens for the home supposed to be waiting for her in the future. So with painstaking effort and constantly increasing skill the numberless stitches were taken day after day. Upon the quilts, which were displayed with great pride, bloomed flowers the like of which nature has never been able to imitate even in her wildest moods, yet these were considered, and justly so, an evidence of the skilled worker.

Very early in those days were the fingers of the small maiden taught to hold and manipulate the needle. A certain amount of work was set aside for each day, and only on rare occasions could one be excused from the fulfillment of the allotted task. Usually the first lesson given was the overcasting of long seams; this was followed by a lesson in hemming, then backstitching, then making of the first quilt, either a four or nine patch pattern, and last of all came the making of buttonholes. It was counted a red-letter day in the life of a young girl when the first garment, cut out and made by her own hands, was ready for inspection. Great was the joy of the mother on account of the progress made by her daughter in an accomplishment of which the women of that day were justly proud.

But in this day of many accomplishments for women, in a time when so many garments can be bought ready-made, and when sewing-women can be had if desired, children are not taught to sew as they once were. It is a well-known fact that a large per cent of the girls who are sent from home to school are incapable of keeping in repair their own wardrobes. Many are unable to mend a broken stitch, to darn, to put in a neat patch or to do the simplest forms of needlework, and are dependent on a seamstress or more fortunate associates for things they should know how to do themselves.

Some months ago a woman of some nineteen or twenty summers was seen attempting to mend a slightly worn dress-sleeve, and her efforts would have been laughable had not a feeling of pity been aroused that one of her age should be so ignorant, as with arm at an inconvenient angle for work, and needle held almost parallel with thumb and forefinger, the work was laboriously carried on, and only finished after much difficulty. The remedy for this condition, which exists to a greater extent than many suppose, is, "teach the children to sew." The lessons should be begun early. If you choose, give the child, by way of amusement, a pin with thread tied about it—if you do not object to

seeing the frowns that come and go in the small forehead because the thread will not pull through—but let the pin give place to the needle at the earliest possible date. The sooner a child learns to handle a needle properly and gracefully the better for it. When this object is attained the foundation is laid for work, and the few stitches taken, irregular and uneven as they may be, are sure to improve with practice.

Among the first regular undertakings that may be placed in the hand of the young seamstress is patchwork of bright-colored pieces. This will teach the lesson of neatness, order and regularity of plan. Words of praise and commendation over the day's work will be found the greatest incentive to improvement.

"Educate your children while you amuse them" is a maxim of the kindergarten which might be used with equally good results by mothers. The best method in the world for teaching the small woman to sew is the dressing of a family of dolls. Here a child's pride may be aroused. In order that the dolls may be as well and neatly dressed as any in the neighborhood, she should be taught that the stitch that is worth putting in is worth putting in well, and because it is her work it should do her credit. The child should be made to feel that the needs of the family of silent children should be carefully looked after.

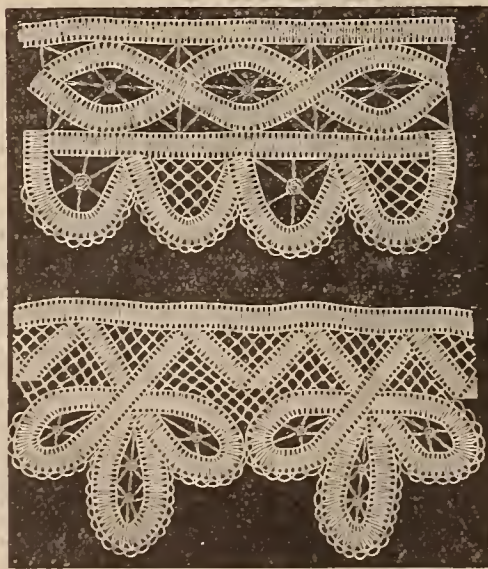
A mother of my acquaintance who is a dressmaker recently gave me something of her method of teaching her young daughters to sew.

First they are furnished with material and implements for work, and as the mother plans and works so do they, cutting by a model and fitting as they see her do. As a result they are learning to sew while they think they are at play. But the play-days pass away, and the lessons learned during those days must be applied to practical work. The young girl must be taught to make and properly care for her own clothing. By working with the mother, helping to cut, arrange, plan and think for herself, much may be accomplished in the way of educating our daughters to know something of the art of needlework.

VINOLIA A. BROWN.

LACE-TRIMMED TOWELS

There is nothing in linen that makes a more acceptable gift than a pair of handsome towels. These are quite expensive to purchase, but any one who can make Battenberg lace can easily make very handsome ones at a small cost. The two edgings given were used upon the ends of two pairs of towels. One pair were fine damask with hemstitched hems and two rows of drawn-work above, while the other pair were plain white damask with a very poor plain fringe. The first pair were all ready for the lace to



be sewed upon the ends, but the other pair required considerable work before they were ready for the lace. The fringe was first cut off, and threads drawn for an inch hem, which was done in double hemstitching. Two inches above this threads were drawn for another row of double hemstitching. The towels were then ready for the lace-ends. They must be seen to be appreciated. A very handsome pair could be made from the finest of plain white crash, with hemstitching and drawn-work upon the ends and finished with lace. Nothing could be neater than dresser and commode scarfs made in this way.

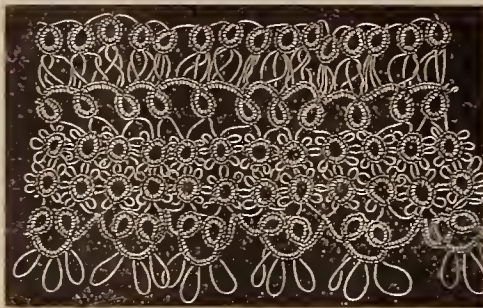
MRS. H. L. MILLER.

TATTED LACE, NO. 1

With one thread make a ring of 2 d k (double knot), p (picot); repeat until there are 7 p, 2 d k, close. Continue these rings, until the lace is the desired length, joining them at second p, and leaving a half inch of thread between each ring.

Second row—Same as first, and joining to the first at middle p.

Third row—This forms the scallop on lower edge, and is worked with two threads. Make a ring of 8 d k, join to first loop of preceding row, 8 d k, with two threads * 3 d k, p (all picots in this row are made



long); repeat three times from *, 3 d k, another ring of 8 d k, join to same loop, 8 d k, with two threads 6 d k, join to next loop, with two threads 6 d k; repeat from beginning.

Fourth row—Make a ring of 16 d k, joining in center to loop on upper edge of lace, with two threads * 1 d k, long picot, 3 d k, p, 3 d k, p, 2 d k; make another ring, join to next loop; repeat from *.

Fifth row—Make a ring of 8 d k, join to two of the long p, 8 d k; repeat, leaving a short length of thread between rings.

TABLE-LINEN AND ITS CARE

Table-linen is one of the essential refinements of home life, and the more rigidly the housewife must economize in money expenditures, the more thoroughly should she understand its proper choice and care.

Table-damask comes in unbleached, half-bleached, white, Turkey red, and a wide range of delicate colors and white; in pattern-cloths round, square and oblong shaped; in sizes ranging respectively from two to four yards in diameter, one and one fourth to four yards square, and from two by two and one half to three and one half by six yards, and in piece-goods varying in width from fifty-four to eighty inches. There are also beautiful plain damasks and round-thread linens seventy-two inches wide for those who have time and skill to ornament cloths and napkins.

All pattern-damasks and the better piece ones have napkins to match; those for dinner-cloths giving a choice in sizes between five eighths, three fourths and seven eighths of a yard square.

A table-cloth of piece-damask cannot possibly have the finished look of one bordered all around, but there is a much wider range of patterns in medium-quality linens of the latter sort, and they are also somewhat less expensive. The cheapest damasks are not durable or in any way satisfactory, and should never be purchased if economy in any other direction can compass medium-quality ones. If the former are not adulterated with cotton they are filled with dressing, and after the first laundering are sleazy and rough. A full-cream damask will give better service than a snowy white, and medium-quality linen is more durable than fine.

Table-linen should always be hemmed by hand. Cloths made of plain linen that can be hemmed all around may have hems from one and one half to three inches in depth, according as they are for tea, luncheon or dinner use; but figured damasks, both cloths and napkins, should be finished with the very narrowest rolled French hem.

To give table-linen a fair show for durability, however, it must be properly laundered, and a very heavy pad used underneath the table-cloth. For the latter purpose an unbleached felt fifty-four inches wide costs only fifty cents a yard, and a heavier bleached one sixty inches in width costs seventy-five cents a yard. Borax is the safest and most effective detergent, and should be used in the proportion of one heaping teaspoonful to a pailful of water. Let the linen remain in it fifteen minutes before rubbing. There is rarely any necessity for rubbing table-linen on a board; rubbing soiled spots with the hands, working up and down, squeezing, and wringing through a wringer is sufficient. By pouring scalding-hot suds or borax solution over the linen, and allowing it to stand fifteen minutes before rinsing, the wear and tear of taking it out of the wash-boiler is obviated, and the linen more easily kept white. Table-

cloths that are old and thin need a little boiled starch in the last rinsing-water. Linen should never be dried out of doors in freezing weather.

A table-cloth looks best with only a crease pressed through the center lengthwise. If folded in this way and ironed on both sides until perfectly dry it may be lightly folded crosswise, and the cross-folds smoothed out with the hands when it is laid. Napkins should be simply folded square. Center-pieces and the like must never be folded; if short of room to spread them out, roll over a round stick (a window-shade roller is good) after ironing thoroughly dry. Damask looks best ironed over a well-padded board.

ELISABETH MORETON.

THE FARM HOME

Dwellers in cities and towns where land is sold by the foot and is very expensive have a good reason for setting their houses close to the street, but why people who own a farm should persist in doing much the same thing is inexplicable. A generous lawn, with trees, shrubs and flowers, is as important a feature of the farm home as the house itself, and the farmer who considers land wasted that is reserved for beautifying the premises is making a great mistake. It not only adds to the attractiveness of a place, but increases the value of the property as well.

It is impossible to create an ideal country home when all the thought is given to building the finest house in the neighborhood. A modern house with balconies and dormers, bay-windows, verandas and towers built close to the street, with no setting of green lawn and shade-trees, is not an attractive object, and if no attention is paid to putting the house where these balconies, bay-windows, etc., will command pleasant views they seem out of place. The house may have all modern conveniences and be filled with elegant furniture, but if its surroundings are bleak, desolate and uninviting it lacks an essential element of the ideal farm home.

The barns and other farm buildings should be put at a reasonable distance from the house and be built with an eye to beauty as well as utility. Let them be kept neat and attractive so that they will add to instead of detract from the general appearance of the place. As one approaches a place for the first time let his first impressions be favorable by beauty and comfort being seen on every side. If there must needs be some unsightly places or buildings, screen them from view as much as possible by planting a hedge of some evergreen, which in four or five years will grow to make a screen of living green.

With the house at a proper distance from the road it will be necessary to have a driveway from the road to the house. Let it be laid out in a graceful curve, and, if possible, let it pass near a veranda where a roof may extend over it so that one may step from a carriage to the veranda without being exposed in stormy weather. It is a good plan to have a ring in one post here so that a horse may be hitched for a little while if necessary. There should also be a hitching-post farther from the house, with a tree near to give the horse shade while hitched there.

Every farmer's home should not only be comfortable, but beautiful; not necessarily costly and elegant, but at least adorned from Nature's storehouse. We shall not go far astray when seeking to beautify if we stand at wise old Nature's knee and learn of her. She is forever trying to beautify and hide unsightly objects with blooming flower, clinging moss or trailing vine. As surely as "a person is known by the company he keeps," so it is that the home and its surroundings serve as an index of the mind and heart of the occupant.

Browning, the great American landscape-gardener, said, "So long as men are forced to live in log huts and follow a hunter's life we must not be surprised at lynch law and the use of the bowie-knife; but when smiling lawns and tasteful cottages begin to be established we know that order and culture are established."

Goethe's sentiment, "We should do our utmost to encourage the beautiful, for the useful encourages itself," should be kept in our minds. The beauty of a home is not for one family or one generation. It exerts an influence over all who are in sight of it, and the lives of children and children's children are tempered by it. No man can compute its value. It has been well said, "Beauty is the expression of the Divine in nature. The vegetable creation is the rich altar-cloth of the temple of God, in which the recognition of beauty and sublimity of form constitutes the worship."

MAIDA McL.

A MODERN VERSION

Maud Muller, Junior—summer's day,
Raked the meadows sweet with hay.

The Judge came limping down the lane;
He sighed, and seemed to be in pain.

His face was thin and darkly tanned,
Mosquito-bites adorned his hand.

His uniform was sadly soiled,
His linen, too, must needs be boiled.

His saber clanked as near he drew;
Sweet Maud looked up, said "How d'ye do!"

"I've been away to war," said he.
"Indeed!" said Maud, quite cheerily.

"You fought the Spanish hordes!" said she.
"No; flies and insects," answered he.

She said, "You heard the horrid shell,
And groaned as some poor comrade fell!"

"Ah, yes!" he said, "deep groans were mine,
But mostly when 'twas time to dine."

"And stormed you not some Cuban hill?"
She asked, her voice grown strangely still.

"Alas! said he, with sorrowing look,
"I stormed naught save the army cook."

"No Cuban hill!" she said. "Oh, fudge!
I'm disappointed in you, Judge!"

Then with a sigh she turned away
And raked the meadow sweet with hay.

The soldier-judge tramped on again,
And sighed, "Gosh hang the war with Spain!"

Alas for soldier! alas for maid!
Alas for those who at Tampa stayed!

Alas! poor soldiers for warfare wishin',
But always, alack! delay in transmission.

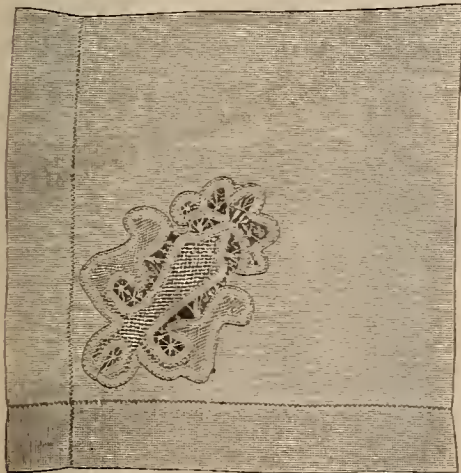
For of all sad words of tongue or typewriter,
The saddest are these, "I'm an unfought fighter!"
—Baltimore American.

APROPOS OF JELLIES

THE first requisite of successful jelly when not served in a mold is to have it quiver. Of course, the jellies now under consideration are dessert jellies, in distinction from fruit jellies. In the latter the necessary stiffness is the great thing to be desired, but in dessert jellies the chief point is that when they are served they should be transparent, brilliant and trembling. That they should be so you must hold your hand when you come to the gelatin. If you wish to be economical, do not even think of jellies, for they make an expensive dessert, as not only is the jelly itself costly, but they are nearly all so much improved by the addition of whipped cream that it becomes almost a necessary part.

The first and best is wine jelly. The following recipe, simple though it be, is quite infallible, and has the great merit of no cooking being required, and the jelly can be made quite as well in the dining-room as in the kitchen: One box of sparkling gelatin, four cupfuls of granulated sugar, two cupfuls of wine, two lemons and a pinch of cinnamon. Put the gelatin to soak in a bowl with a generous cupful of cold water; after soaking one hour toss up lightly with a fork, and put it in a full quart of boiling water, stirring rapidly until it is all dissolved. Then add the four cupfuls of sugar, the juice of two lemons and the grated rind of one, stirring all the time, lastly the two cupfuls of wine; then strain into dishes through a double flannel bag.

Cooking sherry at fifty cents a bottle is better for the jelly than any other kind of wine, and the product is delicious. A higher-



priced wine does not seem to make the jelly any better; and though some people add a third of a cupful of brandy, it seems to coarsen the flavor. When to be served score the jelly with a knife and toss it into a glass dish. Have the whipped cream in another, and add a tablespoonful to each help of jelly.

Be sure always to soak your gelatin first in cold water, then after soaking for an hour or two the addition of hot water dissolves it very quickly. The manufactured gelatins are all clarified, so the flannel bag, or a piece of flannel laid over a strainer, is all that is needed to make them brilliant.

Lemon, orange or coffee may be used instead of the wine. To make one quart of jelly just halve the recipe for wine jelly, and instead of wine use the juice of three lemons. For orange jelly use the juice of one lemon and two cupfuls of orange-juice. For coffee use three fourths of a cupful of clear, strong coffee.

For very festive occasions the jellies may have distributed through them candied cherries, which look very pretty shining through. In this case the jelly must be hardened in a mold and served in a form. It is very easy to get the jelly from the mold by dipping the mold, just before serving, into warm water. Place a dish over the top of the mold and turn it over; the jelly will slip out into the dish. If it still sticks a little, rub the mold



with a cloth wrung out in hot water. Be careful not to treat it to too much heat, as jelly melts very easily, and loses its sharp lines.

A perfect bunch of grapes, either white or dark-colored, makes a lovely thing to put in a mold. Put a small amount of jelly in the mold, and let it harden slightly. Lay your bunch of grapes on this carefully, and when they are in place snip the stems with a pair of sharp scissors, and then pour in the rest of the jelly. Heap whipped cream about the mold when serving.

At a lunch for a bride or a debutante, or to please an invalid, flowers are sometimes imbedded in the jelly and used to garnish the dish. Violets or a white rose may be used, but great care must be exercised with the latter so as not to crush the petals.

Wine, lemon, coffee or orange are any one of them nice with candied fruits, and the two former with Italian chestnuts.

In warm weather use a little more gelatin than in cold.

Whipped jellies are very pretty, and simple, too. Make a wine or lemon jelly when it is cold, but before it hardens, with an egg-beater beat it until it becomes white and frothy. Then put it in a mold and let it harden. Serve it with boiled custard instead of whipped cream, or with any fruit preserve you may have. The dish looks pretty with a row of macaroons around it, giving one with each help.

As you see, all these jellies are made without cooking, but be sure your water boils.

N. MOORE.

A FRENCH COFFEE-CAKE

A French coffee-cake is delightful. It should be baked in a shallow pan, and be well iced with a coffee glaze, which makes it very attractive. To make one, take two cupfuls of butter, three cupfuls of sugar, one cupful of molasses, one cupful of very strong Mocha coffee, one cupful of cream or very rich milk, the yolks of eight eggs, one pound each of raisins and currants, one half pound each of citron and figs, and five cupfuls of flour browned after it is sifted. Brown the flour in the oven, watching carefully to keep it from burning. When cold sift in with it three teaspoonfuls of baking-powder. Cut the figs and citron into strips, dredge all the fruit with flour (white flour). Bake an hour and a quarter in a very moderate oven, in a pan well lined with thick buttered paper. Leave it in the pan until perfectly cold. In the meantime prepare the coffee glaze, which is made this way: Put in a saucepan about one pound of granulated sugar, add one gill of cold water, and let it boil for about five minutes; pour it at once into a shallow earthen bowl; when it is cooling stir it at first, then knead it with the hands rapidly; work into it two tablespoonfuls of coffee essence, mixing and kneading until it becomes quite hard. Let the glaze rest for half an hour, then put it into a bowl, set it in a saucepan of boiling water, and let it gradually melt out: then spread quickly over the cake. It makes a beautiful pale brown icing, which is nice over a plain coffee-cake also. To make the coffee essence put one ounce of Mocha coffee, ground fine, in one cupful of cold water, and let it boil down to two tablespoonfuls: strain it through a cloth bag, squeezing out all the extract possible.

Mrs. W. L. TABOR.

PROPER RECREATION FOR THE YOUNG

This is a question over which the tender, anxious-hearted mother often ponders. She desires all the happiness possible for her children, but just where comes the dividing-line between innocent pleasure and harmful amusement is sometimes perplexing.

What constitutes "proper recreation for the young" is a widely discussed topic. Many wise and deep thinkers on the subject advocate the taking of children to see a good play as being a check to a later depraved taste in dramatic performance exactly as a carefully directed taste for reading will never degenerate. Others again, equally honest in their endeavor to enlighten us as to our duty in this respect, regard it as little

short of murdering all the finer sensibilities of a child's nature to admit it to a play-house.

The parent who supplies her children with every facility for enjoyment, including parties, theater-going and the like, does not think she is lacking in the duty she owes to those God has given into her care any more than does the mother who pulls the unpromisingly straight locks of hair about a mass of twisted papers and arrays the small figure in its best dress for the Sunday-school picnic. Each is striving to give only what she regards as "proper recreation." Hence, as is thus shown beyond a doubt, much depends on the individual point of view.

The simpler form a child's pleasure takes the better for its present and future good. We have now too many miniature men and women with tastes and appetites prematurely jaded. Children demand diversified occupations—that is, normal, healthy, happy-hearted children do; it is a law of their being to clamor for a change. There is a marked tendency on the part of the wealthy class to keep their children as such as long as possible, nor are they allowed to mingle in the gaities of the "grown-ups," as is frequently found among the well-to-do middle class.

Turning back to my childhood for memories of its chiefest happiness among many happy hours, I can truly say, "Blessed is the young soul, boy or girl, who has been raised in an atmosphere of books, for there they can find friends chiming in with every mood." Give them plenty of good reading matter, and you have given them not only a present joy, but what in after life will still prove a recreation and a pleasure.

Teach them to study nature, her smiles and frowns; the earth, sky and air are full of wonders. Choose rather the form of entertainment that will keep them out in the sunshine than in heated rooms nibbling at indigestibles. Mountain jaunts, fishing expeditions, tennis, croquet—all will reward them with health and vigor. Finally, the most important thing of all is that the little minds shall be early taught that home is the pleasantest place in the world, and then make it so to them: not quite in the sense of constantly devising new ways of amusement, but by a judicious admixture of duties with their recreations, for the child who has nothing to do but amuse itself has scant capacity for true enjoyment.

MARY M. WILLARD.

HOME TRAINING

I was much impressed with a remark made by a young girl of wealth who was engaged to marry a man who, while he commanded a good salary, was poor. Being an only daughter she had been very much indulged, having had no cares whatever. She now realized the need of household training, and when the young man wished to hurry the marriage she said, very sensibly, "No; it is far better for both of us that I should learn the art of cooking—master bread-making and learn how to make that cup of good coffee that you like so well."

More than one young man, when the honeymoon was over, has been made miserable by his wife's lack of home training, and the disorderly and unattractive abiding-place forced him to seek clubs, restaurants and

outside comfort. It was all because the girl he had chosen had never been taught any of the accomplishments of home-making, which is the grandest work a woman can do. Culture, intellectuality, great genius—nothing can take its place. How I pity a young man who marries a girl who becomes indifferent to her duty in this direction, considering it drudgery, and will not enter into it with the right spirit!

This accomplished young girl, who was a fine pianist, a linguist and a scholar, had the good fortune to have the right kind of a mother. She realized that the charm and delight in her home were the result of the watchful care and oversight of her mother, who was ever on the alert to make home attractive to its inmates; who not only knew how to have things done, but could do them herself. Such a woman can preside gracefully either as the wife of a millionaire or in the humble home. She is a benefactor to her race.

All honor to a young girl, no matter if she has wealth, who says, "Let me first learn the details of the housekeeper's art."

SARA H. HENTON.

BATTENBERG LACE WORK

Among the illustrations are shown two very pretty corners for handkerchiefs, of Battenberg lace combined with various stitches. These will individualize the article as even an initial does not.

The bolero jacket can be made of either black or white Battenberg, and worn over a colored silk waist, making it very effective for an evening costume.

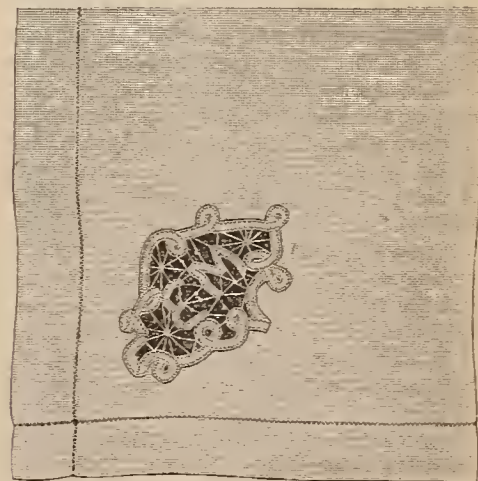
GRACE MCCOWEN.

PREPARE FOR SICKNESS

One time a thoughtful grandmother presented her little granddaughter with a snowy-white, lace-trimmed gown. The little girl was very proud of it, and wanted to begin wearing it at once, but was told that it was her sick-gown, and must be laid away until needed. A short time after this she was allowed to take it along when she went on a visit to one of her friends. The child quietly informed her hostess that she had come to make her a visit, and brought her sick-gown along.

My mother had often heard this story, and greatly startled me one day by bringing home a bolt of bleached muslin and quite a number of yards of trimming. In answer to my query as to what she was going to make, she said she intended to make her some sick-gowns. This hurt me, for I hated to think of dear mother getting sick; and to see her sewing on them almost brought the sad scenes of the sick-room before me. I always liked to have such things, and took great pride in laying them away in my drawer, but never thought of needing them only on visiting occasions. Mother always said it was well enough to have them for all occasions, but the most important one was in sickness. "If you do not make them when well," she would say, "you will not have them when you get sick."

The gowns were finished and laid away on the closet shelf. Only for a short time, however, for dear mother was soon stricken down, and for the greater part of three years she lay upon her bed of suffering. And, oh, those gowns—how glad I was that mother



had them! And what pride we girls took in keeping them clean! We could not bear to see her lying there in soiled gown and bed.

I have thought more on the subject since my mother's long sickness. I have often visited the sick-room and found the patient lying upon a bed that resembled a pile of rags more than anything else. The bed-clothing was half worn, and not clean besides, while the patient wore an old faded wrapper. While it would have answered if they had been well and able to work, it was far from suitable for a sufferer to wear. While I knew that if they had used a little

[CONCLUDED ON PAGE 14]

forethought, and worked a little when well, they would have been prepared for what must come to us all—sickness and death—yet it made me feel sad to see such a lack of proper clothing.

I have often heard my mother and grandmother tell of being called to different places to help prepare the dead for burial, when enough sheets could not be found on the place to cover the pall, while it was often necessary to make a suit of underclothing for the deceased, and they would furnish the sheets from their own linen-chest. Oh, if every one would awaken to the need of such things and be prepared!

Every one whose circumstances are such that they can live as civilized people should have plenty of good bed-linen. Replenish your bed-linen before it is all worn out, and it will be less expensive. Plain sheets and pillow-cases will answer for general use, while sheets of a finer quality and lace-trimmed pillow-cases would be nicer for special occasions. Pillow-cases may be hem-stitched or trimmed in lace. Home-made lace is pretty and durable, but if you do not have the time for such work you can buy very pretty lace that will answer as well.

We do not see as many pretty bed-clothes in the homes nowadays as were seen in the homes of our grandmothers. However, with patience to make them, we could have them as they did. I have several nice quilts that were made by my grandmother, which I prize very highly; but I have quite a number of nice quilts and comforters that I made myself. I do not believe there is any need of being without plenty of good bed-clothes if we would devote a little of our time to making them.

As to gowns, I will not attempt to describe them. You can buy nice patterns by which to cut them, and use your own judgment in trimming. M. BELLE VAN HOUTIN.

THREE DINNER DISHES

CROWN OF CHOPS.—This is a very handsome but quite expensive dish, more suitable for a dinner party than the home circle, for the larger it is the more ornamental it will be. Have your butcher take the two racks of chops from a lamb and crack the backbone at the base of each rib—this makes the racks flexible; then have him bend it around to form a half-circle and pin it with a wooden skewer to the other back, which has been treated in the same way. This will give you a high, crown-like piece of meat with a hole in the middle and the meat on the inside of the bones. Each rib-bone must be trimmed and scraped down nearly to the meat. When this is roasted, stand it upon a platter, fill the hole with green peas—fresh if possible, canned if must be—and garnish the dish with a wreath of water-cress or parsley. The carver will find that it cuts very easily. Insert the knife between each rib and cut right down. Cooked in this way the lamb is juicy and delicious, and with currant jelly in addition nothing can be nicer. It also stimulates conversation, as it is an unusual way to prepare lamb, and nobody knows just at first what it is. After the first mouthful each housekeeper makes a mental note to add it to her culinary repertoire of new dishes.

BEEF LOAF.—Have the butcher put through his meat-chopper one pound of fat salt pork and two pounds of what is called the round. Have your cook mix thoroughly with the meat two eggs, both whites and yolks, and a cupful of cracker-crumbs. The eggs and cracker-crumbs may be stirred into the meat with a wooden spoon. Then season well with salt and pepper and a dash of nutmeg. The eggs and cracker-crumbs will hold the meat together, and now form it into a loaf, put it into a pan and bake it, basting it frequently. There will be the base for a rich brown gravy exuding from the loaf, and if you add half a teaspoonful of kitchen bouquet just before serving, the tastefulness and color of the gravy are much improved. It is better to serve the gravy as a sauce around the meat, as they each improve the other. Three pounds of meat and pork should furnish two meals for a family of three—the first time hot, the second cold. It is quite as nice cold as hot, and in summer, delicately sliced, makes a delicious filling for sandwiches. The round should cost fourteen cents a pound, the pork twelve, the eggs two cents each at this season, and the crackers two cents. This will give two appetizing and nutritious meals for the small cost of forty-six cents.

BRAIZED LIVER.—Beef liver is the best, but you want to be sure it is perfectly fresh. Get from three to four pounds cut in a chunky piece, because if it is too thin it dries up. Have the butcher lard it thoroughly with strips of fat salt pork, and be

sure he puts it all through the meat and not merely on top. About a pound of pork to four pounds of liver will be enough. After washing the liver carefully and laying a strip or two of pork on top, put the liver in a pan and cover it with another. Bake it slowly and baste very often. If you do not baste frequently the liver will get hard on the outside. The pork forms a base for a fine rich gravy in this case also. If you wish a change from the kitchen bouquet, use a few drops of chilli-sauce, or put a small onion in the pan and let it cook with the liver. Even the gravy itself is very nice. Of course, in both this case and the beef loaf the gravy is thickened with browned flour. This liver makes two meals also for a family of three—hot first, then sliced cold; it looks very pretty the latter way, as the larding shows white in the brown meat. Cresses around it are nice for lunch. If prepared, it may be cut into small pieces and warmed in butter, pepper and salt, and served upon bits of toast. Allowing ten cents a pound for liver and twelve for the pork, fifty-two cents will provide two ample meals for three.

N. H. MOORE.

THE COUNTRY CLUB

Town and city clubs we have galore, but country clubs, even in agricultural lines, are rare. It is therefore refreshing to hear of a literary club for men and women celebrating their second anniversary, and christened with the sturdy, significant name of "The Country Club." This club has a flourishing existence in a thrifty farm neighborhood, and was established through the influence of one brainy farm-wife. At first it was composed of only women, who met fortnightly on Tuesday afternoons. However, "the little candle shed its beam." Now the meetings are held evenings, and the wives and sisters have escorts. No longer are the men-folks too tired to go, neither do they get sleepy, and to their surprise they find they do care for good literature. Farm topics or any other topic of living interest are not excluded, questions relating to improvement of rural schools being particularly prominent. It is noticeable that the papers, readings, etc., are mostly by women; but this is only their little game, for they believe in the capabilities of husbands, sons and brothers, and hope in time to bring them to see the educational benefit of being workers as well as listeners. J. M. M.

THE LATEST NOVELTIES IN NECK-WEAR

No. 1.—Fit a collar to your neck. Line with buckram, but cover with some soft material. Sew together two lengths of ribbon. Tuck in tiny tucks and fit to the lining. Make long enough to lap, and fasten with hooks and eyes at the back or in front with fancy stick-pins.

No. 2.—Lay in large, deep folds, say three or four at the most. Fasten in the back with hook and eyes, and finish the front with a four-in-hand securely fastened to the lining. This is lovely in pink silk or black satin.

No. 3.—Tuck a collar as described above. Cord the tucks so that they stand out well, or cut and tuck on the bias.

No. 4.—Tuck a collar with narrow tucks, putting in at least ten, with spaces as wide as tucks. Tuck a piece crossways. Cut this piece V-shape. Make the collar and V of white silk. Cut revers, not too large, of navy blue or rich dark red silk, satin or velvet. Stiffen these revers with buckram. Finish around the edge with Valenciennes lace. Make a sailor-knot of white silk and finish at the front of the V. M. M. M.

A LOVELY NEW PINCUSHION

Make a pocket of bright sateen twenty-five inches long and five inches wide. That will give you half-inch seams. Entirely around it put a ruffle of the sateen. You may slash the ends if you wish. Cover this sateen ruffle with a lace flounce. Cover the top of the cushion with lace, allowing it to extend over the heading of the flounce. Or if you wish, run a narrow ribbon around, knotting it at intervals of six inches. Fill compactly. You have a lovely birthday gift for a friend. M. M. M.

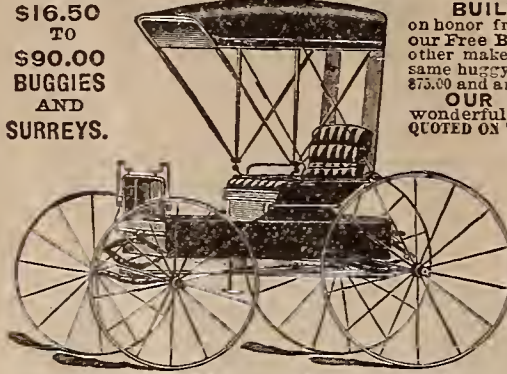
JEWEL CUSHION

A dainty cushion in jewel-work is made from white swiss. Procure a yard of dotted swiss, large dots preferred. Work these over in bright-colored silks so that each color reappears at regular intervals. Make a flounce of plain white swiss or fine lawn, and put on with the new effect—slashed at the corners. Line with pink, blue or primrose. M. M. M.

SEND ONE DOLLAR

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A GIRL FARMER

By Annie M. Burke

CHAPTER V.

DEAR MOLLIE:—I wish you would come to see me. The other girls have all been here, and you might come, too. I have been lying sick here a long time, and everybody seems to think of me but you. Please come this afternoon at three. I know you won't refuse when a fellow asks you like this. JOEY MADISON."

This was the note Joey gave Bessie to give to Mollie. Bessie put it in her pocket, but before starting on her errand she went to the cellar where her mother was dressing butter. Amy was also there washing crocks. Bessie told them about the note and about how Joey had said he must have Mollie Gordon come to see him. The mother was astounded.

"Well, now, that does heat all!" she ejaculated. "I'm not a bit surprised," said Amy. "I knew he was struck with that Gordon girl!"

"I told him you wouldn't like his sending for her this way," said Bessie, "but he said the note had got to go. He doesn't care what happens just so he can get to look at Mollie Gordon for awhile and talk to her. He as good as said so."

"It does heat all!" ejaculated the mother again. She stood beside the churn, with a ladle of butter in her hand. The buttermilk was dripping off upon the floor, and she did not know it.

"I think he's going to marry her if he can," remarked Bessie.

"Nonsense, child; how you do talk!" cried the mother, throwing the butter into the bowl with a splash. "Joey's sick and peevish and don't know what he wants. He's always taking a notion of wanting something or other when he's getting over these sick spells of his. When he's up again he won't think any more about her than any other girl."

Bessie did not think this. She was only sixteen, but she had her own mind about things. "He was crazy about Mollie Gordon before he fell sick," she said. "I know that for sure. If he can get her now I know he'll take her."

"If he can get her!" repeated Amy, scornfully. "You talk as if she mightn't take him! Of course he can get her! She'd snap at the chance of Joey!"

"I don't know about that," said Bessie, doubtfully. "She doesn't treat him a bit nice. I've watched her. He has to make all the advances. He's as friendly as can be, and she isn't any more than civil to him."

"Oh, of course she acts proud and independent," said Amy; "but it's just put on. A girl like that's easier to get than one of the other kind. They just pretend to not care for people!"

Bessie did not think this was the case with the Gordon girl, but she did not stop to dispute it. "One thing I know," said she; "it will kill Joey if he doesn't get her."

"Tut, tut, child, hold your tongue!" exclaimed the mother. "Joey's not wanting her. He's just sick and peevish. Didn't I say he's always taking a notion to somebody or something or other when he's getting over these sick spells of his? Last summer didn't he send me off to Ruth Ann's, seventeen miles away, to get Judith and her baby, just so he could see the baby? I guess I know that boy! He's not thinking of getting married and leaving me. I won't have it so! There ain't any girl living going to get my Joey from me till he's thirty-five at least! I always said so. He's just sick and peevish. He'll forget all about her when he's up again."

"But the note, mother—I can take her the note, can't I?" said Bessie. "I don't dare go back to Joey's room again—I can't unless I give her the note!"

"Oh, you take the note, and let her come," said her mother. "We'll have to humor him. It'll do no harm."

And Mrs. Madison, as she moved about her cellar that afternoon, tried to think that this was true. She couldn't, she wouldn't believe there was any circumstance threatening to rob her of her beloved Joey. "Not till he's thirty-five," she said. "The girl that gets my Joey from me before he's thirty-five'll be smarter than I am, that's all!"

In the meantime Joey up in his room tossed and sighed, far more restless now than he had been before all that restless day. From the window he saw Bessie depart on her errand; half an hour later he saw her return; then he looked at the clock and waited for Mollie. Three was the time at which he had asked her to come. It had been dreary and cloudy all the afternoon, but had rained very little. However, at twenty minutes to three it began to rain briskly. Joey fell back upon his sofa in despair.

"She won't come if it rains!" he said to his mother, who was with him. Mrs. Madison looked at him as he lay there with closed eyes and nervous frown. She pitied her boy keenly.

"She'll come to-morrow, Joey," she said. "To-morrow, oh, to-morrow!" groaned Joey. "I want to see her to-day! I want her now!"

Then suddenly he opened his eyes and looked at his mother. "I'm ashamed of myself, mother," he said. "I've got you worried to death with my peevishness. It's because I can't sleep! If I

could only sleep! But I ought to be a man, anyway, and not such a weak humbug of a fellow!"

Then he persuaded her to go away to her room and rest and forget about him for awhile. His sisters, too, who came in a moment later, he made go away and not bother about him. Then he was alone and had no company except the drizzling rain on the window-panes. Joey was very fond of his women-folk, and became lonesome when they were not with him; he sometimes got tired of them, too. They were all so much alike; all were pale and slender, and all, like himself, had nervous dispositions. After awhile he heard steps coming along the hall, and he thought one of them was coming back. His door opened, but he did not raise his tired eyes to see which one it was. Then suddenly something made him look up. He started violently. It was Mollie!

She was standing there taking off a wet mackintosh. "Mollie! Mollie!" he exclaimed, sitting up. "Is it you, Mollie?"

Then he sank back upon the cushions again. He had forgotten that Mollie, the "female farmer," was not like other girls. He had forgotten that rain-drops did not hurt her. She came over and sat down on the edge of his sofa, very friendly and kind for her to be. The girl's fresh complexion was as good as flowers in a sick-room, and if you felt toward her as Joey did it was a great deal better. Her hair was curled by the damp weather, and her cheeks were wet with the rain. "Wild roses with the dew on 'em!" thought Joey. Even her eyes looked as if the rain-drops had washed them. Then her manner was so rest-



"I WON'T ASK YOU TO ANSWER ME NOW, MOLLIE"

ful; she had no nervous movements, no quick frowns or smiles.

"I thought you'd never come!" murmured Joey.

"I didn't know you were so sick. Then, I was very busy," said Mollie.

"If you'd been sick I'd have been to your house twenty minutes after I heard of it," thought Joey. But he said nothing.

She put her hand on his forehead. "Bessie said you couldn't sleep nights," she said. "You must have a hard time."

Mollie was not generally a sympathetic young woman, but she pressed his throbbing temples now as if she knew exactly how the pain felt. But she had had some experience with sick people. "I used to put Cousin Edward to sleep when he lay sick," she said; "perhaps I can help you." And she put her strong, cold hand on his worried forehead and tired eyes in a way that would have soothed any one. Joey stopped wiggling and tossing suddenly. A look of deepest peace and joy settled upon his face as he lay there with Mollie's hand on his forehead. I think Joey was in about the seventh heaven of happiness just now.

After awhile, when Mollie thought he must be asleep, a tear rolled from his closed eye down his cheek. He said nothing, and she did not, but Mollie was greatly surprised. She was also much moved. "How much he cared!" she thought. "How much he cared to have me here!"

Perhaps Joey was weak in some ways, and not much of a hero, but he had a great faculty for making people love him, and he had his own way of doing good in the world as well as those who are very firm about their tears.

But after awhile Mollie perceived by his breathing that he was sound asleep. Then she got up and put on the wet mackintosh again. At this moment Mrs. Madison came into the room. She looked first at the sofa.

"Why—why—how do you do it?" she whispered.

"I just smoothed his forehead," said Mollie. "I used to put my Cousin Edward to sleep that way."

They went out of the room together, Mrs. Madison closing the door very softly. She was quite friendly and kind to this girl. She could not help

being grateful to her for putting Joey to sleep, and they had quite a conversation together down at the door about Joey's sickness, and about the weather, and about raising poultry. It was the first time Joey's mother had seen Mollie Gordon, and she liked her. All older people liked Mollie. She was so composed and sensible, and had no smart ways or giggles or tosses of the head. Then Mollie's splendid appearance of strength and health and the fresh beauty that went with them—Mrs. Madison was too much like her son to be indifferent to these things.

"So that's the Gordon girl, is it?" she said to her daughters when Mollie had gone. "Well, I must say Joey had his eyes open when he picked on that girl to be silly about! I didn't know there was any such nowtimes. In prairie days, when I was young, there used to be a few girls like that, but I didn't know there were any now."

"Why, mother!" said the girls, in surprise, "we thought you wouldn't like her! We thought you would hate her for catching Joey so!"

"Oh, you needn't fret; I'm not going to give Joey to her!" said the mother, promptly. "I was giving my opinion, that's all. Joey shan't fall in love with her. I won't hear of it! Thirty-five is soon enough for him to think of leavin' me. All I say is I can't help respectin' the boy a bit for pickin' on the kind of a one he did for her! Silly about!"

When the mother left the room the girls had a short talk themselves.

"I'll tell you what my mind about it is," said Ruth; "Joey's going to marry that girl before the year's out if she'll have him! I don't care what mother says!"

"One thing I know," said Bessie, "mother'll never get him to give up the 'notion,' as she calls it, of the Gordon girl. It's more than a notion with Joey. It's life and death with him; I can tell by the way he acts."

"And there's one thing I know, too," said Amy; "and that is, mother won't dare oppose him very hard about it; he's too nervous and too subject to sick spells. She won't dare."

to shake. He felt weak suddenly, and sat down in the wet weeds to rest. He was not well yet. Then he looked up at Mollie's parlor windows. They were brightly lit, and the shades were not drawn. He could see Aunt Kate at one window, the old grandfather at the other, and farther back in the room he saw Mollie with little Maggie in her lap. Instantly he pricked up his ears with keen interest. If Mollie was having her folks in the room this way it was not very encouraging for Ned. It was a sure sign there was no "sparkling" going on. Joey got up out of the weeds feeling strong again and comforted beyond words. Ned's visit amounted to nothing, nothing at all, so long as Mollie received him in this way. He slipped back home again and went to bed, and in the morning was actually none the worse for his heedless exposure.

But on near the end of August there was a barn-raising at Jed Barker's. The hay-making and harvesting and threshing were all over now. There was no rush of work on hand, only manure-hauling or something like that, so every one was out at the barn-raising. Men, women and children thronged the place. Part of the men and boys climbed over the skeleton of the barn, and others collected in a great crowd on the ground and hoisted timbers. In the house the women rushed about, preparing a gigantic dinner, while standing out on the ground, watching the barn go up, were the grown-up girls and the little children.

The girls were having a good time out here shouting jokes and greetings to the young fellows on the building, and throwing to them doughnuts and apples from a basket they had in their midst. The boys shouted back replies and witty remarks and were incited to wonderful displays of strength and skill in the way of lifting, pounding and climbing because of the feminine eyes regarding them from below.

Mollie Gordon was at this barn-raising with little Maggie running about after her. To those who had ever been at the Gordon home it was a familiar sight to see this fat little girl running about after Mollie. All the time when she was not in the field little Maggie was to be found near her. The child was Mollie's darling. She was the only person Mollie ever kissed or caressed or was foolishly fond of. Maggie was Aunt Kate's grandchild, and not even first cousin to her, yet it was Mollie who took care of her and trained her in everything. She did not want Aunt Kate to have the raising of Maggie. She did not like her aunt's easy way of telling fibs and breaking promises when it suited her. She despised people who had no scruples about these things, and was determined the little girl should not grow up to be this kind of a woman. So she took care of little Maggie herself, and instructed her in everything.

The little girl got along very well at the barn-raising to-day till about the middle of the forenoon, when she fell from the top of a pile of shingles, and got hurt. Mollie at the moment was engrossed, as all the big girls were, in watching Ned McFarlan perform a wonderful feat of climbing. However, when she heard little Maggie's cry she immediately ran to pick her up. After that she gave up watching Ned, and with Maggie went to an over-turned wagon-hox that lay upon the ground, and sat down. This wagon-hox was in the shade of a big maple. It was a nice, inviting spot, well apart from the crowd, and Mollie had not been seated here ten seconds till a young man high up on the frame of the barn suddenly slid nimbly down to the ground by the aid of a two-by-six. He immediately went over to the wagon-hox and threw himself down beside Mollie. This young man, of course, was Joey Madison.

"Isn't Ned a splendid fellow, though?" he said, enthusiastically. "Just see how he can climb! Then I saw him helping join two big timbers awhile ago. It would have taken three such fellows as I am to do what he did!"

Mollie's eyes followed Ned with somewhat of interest again, but she said nothing.

"Ned has been my envy all my life," proceeded Joey. "When we were little fellows he could cheat at marbles if he wanted to, and you'd never dare tell him of it. He could tell any story he liked, and no one could call him a liar; he could thrash 'em if they did; he was always so big and strong. And it's just the same now he's grown up. No one can say a word to him; he can lick them! I don't know how it is with you girls, but I should think every one of you would be up to your ears in love with him!" continued Joey. And he looked slyly at Mollie as he spoke. He had his own reasons for wanting to know what her opinion of Ned was. "I'm sure if I was a girl I'd pick on Ned every time!"

Mollie turned her face toward him with a look of scorn. "The idea!" she exclaimed. "Do you suppose any girl could love a man just for his size and strength?"

This scornful answer was gratifying to the last degree to Joey. He had reasons, also, for wanting to know how important to Mollie were size and strength in men. He had often worried about it. If she eventually threw him over he believed it would be because he was not very big and strong.

"If I was a girl I'd think of size and strength the first thing," he pursued, wishing to draw her out farther.

"I would not," said Mollie.

Joey considered a moment. "What kind of a fellow would you fall in love with, Mollie?" he asked.

She would not tell. Joey persisted a little. Then Mollie got angry. "Do you suppose I'll tell you that?" she said. "You just want to make fun of me! You want to get me to say what kind of a man I could fall in love with, then you'll tell the other fellows and laugh and make fun of me and have a good time about it!"

Then Joey got ruffled. "You know I'd do no

"It's no use," he said, "I've got to find out. I can't sleep till I know."

He moved swiftly down the road toward the Gordons'. He was going to see if Ned's horse was tied outside; that was all. The path in the middle of the road was dusty. Ragweed and fox-tail grew on either side, and they were soaking wet with the dew. Joey did not heed them much, but hurried on down the road. When he reached Mollie's hitching-post he found he was right. Ned's horse was tied there. Joey's knees began

such a thing!" he cried, hotly. "I don't tell the other boys what you say to me! I don't laugh about you and make fun of you! I don't speak your name lightly anywhere. The only people I talk to about you are my mother and sisters. You've said things like this before, and you know better! You couldn't have a better friend than I am."

He stopped, for want of words. Mollie looked guilty for once. Joey had been a good friend to her, and she should not have said what she did. She could not help distrusting people and giving them the benefit of doubts, but she should not have said this to Joey.

But the young man was non-appeased by her blush of shame. "I'll tell you why I said it if you want to know!" he said. "I didn't intend to speak now and in this way, but I'll make you believe once and for all that my motives are square. Well, the reason I wanted to know what kind of a man you could care about was because—because—I wanted to know—it was just a cowardly way of finding out how much of a chance there was for me with you! That was why I wanted to know, Mollie! I wanted to know if there was any chance for me."

Mollie looked into his face, startled and shocked. "Joey!" she said.

"I mean it, Mollie," said Joey, his anger suddenly gone. He reached over and took one of her hands and held it tightly. The crowd of girls had gone entirely from that part of the yard, and the men and boys were all raising a timber on the other side of the structure. Mollie tried to get her hand away, but she could not. Joey was always exploiting himself as a weakly, good-for-nothing fellow, but there was nothing weakly in his hand-clasp now.

"If I thought I had no chance with you I'd want to die to-day, Mollie!" he said. "I can't help being resentful sometimes, as I was just now, when you suspected me of being mean to you, when all I've thought of for months was how I could get you to love me, and—be my wife—"

Mollie arose from the wagon-box suddenly. She was much excited, and nearly precipitated little Maggie. "I mustn't listen to this, Joey!" she said. "Not one word of it! I mustn't! I won't! I can't think of it!"

Joey stared at her a moment. "You won't think of it!" he exclaimed. "You will think of it! I won't be dismissed so! You've got to give me a chance, Mollie! I won't take 'no' from you this way!"

He made her sit down on the wagon-box again, and took both her hands and held them tightly. "You the same as said you didn't mind if a fellow wasn't big and strong," he began.

"Oh, it isn't that!" said Mollie, greatly troubled. "Then there's some other fellow in ahead of me!" said Joey.

"Oh, no! Indeed, no!"

"Then what is it, Mollie?"

She considered a moment, then made him let go her hands while she moved away from him a little way on the wagon-box. She began in a rather excited way, "You see, I don't feel free to think about such a thing. I don't count myself free to get married to any one. I can't! I mustn't think about it!"

"Why?" demanded Joey. "Why aren't you free?"

Mollie shook her head, but would not tell. Joey persisted, but still she would not say why she did not count herself free to get married like any other girl. Then Joey fell to guessing, and hit very near the mark the very first guess.

"It's because you think you can't leave your family. You think they can't possibly get along without you," he said. "Is that the reason, Mollie?"

But still she would not say. "If I tell you the reason you'll just argue me out of it," she said. "You'll persuade me and make me believe it's no reason at all, and it is."

"If it's your family you're thinking of," said Joey, watching her face, "if it's your family, you know we can easily fix that up between us. You know, Mollie, I'd marry a dozen families and take them all to live with me to get you."

But this did not clear Mollie's brow. Joey regarded her a moment, and frowned. "No, it isn't because of your family," he said. "You'd just as lief think that, but it isn't the real reason. There is no reason in particular. It's just because you don't love me, Mollie. That's why it is! If you felt for me as I do for you you'd forget the family and other things quick enough, or you'd be willing enough to fix them up somehow! It's just because you don't love me, Mollie!"

Mollie did not answer. Joey looked hard at her, but she would not stir or look up. Her expression, however, was more troubled and disturbed than ever, while her eyes had the bright look of excitement that had first come to them when Joey had first said "I love you."

Then Joey changed his tone suddenly, and began to plead and coax. This plan had never failed him with Mollie. She tried hard to hold out against it to-day, but found it impossible. Before long he had her laughing and smiling in spite of herself. Then Joey was jubilantly happy. The men at the new barn worked away at their timber-raising; the women in the house had the big, hot dinner nearly ready, and the grown-up girls ran lightly back and forth from the house to the barn in groups and crowds and pairs. But these two, with little Maggie, sat alone out here on the overturned wagon-box in the shade of the old maple. The big barn-raising and every one at it was forgotten by them.

"I won't ask you to answer me now, Mollie," Joey said finally. "I want you to think it over till the end of the week; then Saturday evening I'll come to get my answer. Do you agree to that, Mollie?"

Mollie actually consented to it. With this they separated.

[TO BE CONTINUED]

A LOAD OF HAY

A load of hay in the crowded street,
A whiff of the scent of clover,
A change of thought—vague—incomplete—
A living a young life over.

A day in August, and clouds of white,
A shifting of light and shadow,
The hum of bees and the martin's flight,
The meadow-larks and the meadow.

Strong arms of the men and the yellow-green
Of the swaths, the steady swinging
Of forms of laborers, strong and lean,
The scythes with their steely ringing.

The roar of trade, and the newshoys' call,
And the dream of a moment's over;
'Twas a brain-wave came through the nose, and all
From a whiff of the scent of clover!

—Stanley Waterloo, in Chicago Tribune.

A BIT OF DOUGH

BY ABBIE PURDY CLARK



ATSY stood at a table in the wide, sunny kitchen kneading neat loaves of bread. She was a picture of sweet, wholesome girlhood in her big apron, with her sleeves rolled up above her dimpled elbows, shining brown eyes and hair, and cheeks faintly flushed with her exertions.

So thought her sister Rose, who sat opposite her peeling apples, and she said as much. "And that open window with the morning-glories about it frames you beautifully," she added, enthusiastically. "You should have been named for a flower instead of I."

"Nonsense," replied Patsy, quickly; "you were very suitably named; but I—how did they ever come to call me Patience, anyway? I think it must have been apparent before I was a day old that I hadn't a scrap of patience!" and she kneaded vigorously.

"Why, I'm sure you have, dear."

"Now, Rose, I haven't, and you know it! I want all sorts of impossible things to happen, and I'm always railing at something."

"That's exaggeration. But aren't you at peace with yourself and the world this morning?"

"No, I'm not."

"What's the grievance?"

"You're so good and proper that you'd be shocked and horrified to the last degree if I told you."

"Indeed, no. Tell me at once."

"Well, briefly, I want beaux," and Patsy hacked the bread briskly.

Rose dropped the apple she held, and gave a little gasp.

"There! I told you," said Patsy, solemnly.

Rose recovered herself. "Not so much at the sentiment as at the expression of it, I think," she ventured. "Most young people like company, and I think that is what you mean."

"Rose Haines, I said beaux, and I meant beaux! I should like six handsome young men kneeling before me at the present moment; then I should be perfectly happy."

"If one sixth of that number would be any comfort to you here am I," remarked a voice from the window.

"I said handsome young men," and Patsy, without confusion, sent a very floury bit of dough at the intruder, who caught it, wrapped it in a morning-glory leaf, and put it in his pocket with an impressive sigh.

"And I should like them all to wear dress-suits and propose to me," continued Patsy.

"And would you marry them all?"

"I shouldn't marry any of them. I don't want to marry, but I should like some fun and excitement."

"There are other forms," suggested Rose.

"That's just it; father and mother are willing we shall have anything and everything in their power to give us, but—they won't let us look at young men."

"I think they would let you look at me all day if you liked. I'll ask them for you," blandly observed the young man in the window.

"I shall not look at any young man except he be in a dress-suit. The fact is, I adore good clothes, and exquisite manners, and all the artificiality of polite society as I have read of it, and I should like to experience it myself, and receive attention and inspire devotion to quite an unparalleled extent."

"But you wouldn't marry the most doting devoted?"

"Certainly not; I'd be defeating my own ends—fun and excitement—if I married. I don't want to be anybody's 'w'!"

"You see, Noel," explained Rose, as Patsy went to put the bread to rise, "when Jessie Lim married and went to the city, we knew what hotel she and her husband were going to stop at, so we looked in the paper for them among that hotel's arrivals, and there was his name in full and 'and w' after it, which Patsy said was all there was left of Jessie."

Noel laughed.

"You mustn't mind Patsy, Noel; you have been our neighbor so long—grew up with us and shared teachers—you are like a brother. So you must understand Patsy's jesting. Father and mother are afraid to trust us out of their sight, almost, because of sister Margaret, who died, you remember, of a broken heart over her unhappy marriage. She was eight years older than I, and though Patsy is nineteen and I twenty-one, we have never had the company of young men at all, because of the worry it would give them."

"Dear Rose," said Noel, gravely, "please never think it necessary to explain anything either you or Patsy say to me; I know you both for the

nicest girls in the world. I remember poor Margaret, but of course it's not quite fair to pronounce on all men because one fell short. However, though I think it only right and natural for you to have the society of men, I revel in their absence. Does it ever occur to you that I'm not regarded as a young man in this house?" And he laughed quizzically.

"Oh, but you—you're just Noel," remonstrated Rose.

"True; but I'm twenty-four. I own the farm and other property, and there's talk of nominating me for auditor. Only last week old Mrs. Parding was recounting to me the charms of her Jane." And his eyes twinkled.

Patsy had returned, and now leaned against the table.

"Tell Mrs. Parding Jane can't have you," she said. "In the dim and distant future when you marry it must be some one Rose and I like, because our farms join, and almost our houses, and we shall see a great deal of her."

"I won't marry till you give me leave; hear me now?"

"Well, seriously, I'm pining for a change; I'm devoured with a wish to go away and see different scenes. Aunt Rachel has frequently asked for one or both of us to visit her; why can't I go?"

"Oh, Patsy, no! It was while she was with aunt that Margaret made her unfortunate marriage."

"Well, I tell you I don't want to marry!" exclaimed Patsy, impatiently.

"There, there! Calm yourself, my child," said Noel, soothingly. "No one shall make you if I can help it."

"How good you are!" and Patsy laughed. "I really don't know how I shall get on without you when I'm away, for I'm going! I'll find father and mother and plant the leaven in their minds now; it will take them a week to decide." And Patsy disappeared.

"Will she really go?" inquired Noel, blankly.

"I suppose so," sighed Rose. "Patsy always does as she says she will."

She did go, though the home hands clung to her and the final consent was very reluctant.

Aunt Rachel was childless and wealthy, and at her house Patsy enjoyed the heartiest welcome; for besides being the child of her aunt's favorite sister, she had sweetness and beauty and a ready wit to recommend her. She met all sorts of interesting people, and she went out a great deal. Dress-suits, which she had once so admired, lost their novelty, and she found that they really didn't enhance their wearer's value at all. The artificiality of polite society which she had desired she experienced, and of adoring young men there was no lack, it being shown that she was a favorite with her wealthy aunt.

She had been three months from home when a letter arrived that filled her with excitement and brought the homesick tears to her eyes.

"Dear Patsy," wrote Rose, "I know you will be surprised, but I hope you will be pleased at mother's letter telling you of hers and father's consent to my marriage with Professor Brown. Yes, it is quite true that he taught me something else besides hotany those happy days last summer, when father had him here giving us a course. But he felt he had no right to speak then, being just a penniless professor; but now he has a fine position and bright prospects for the future, and he hurried back to ask me to share it with him. I am very happy, dear Patsy, and particularly so because father and mother know and like him, and aren't afraid to give me to him."

"Is a dress-suit still the 'open sesame' to your heart? Richard (think of our Professor Brown being my Richard) wore a duck suit when he—when he (excuse me, I see I've repeated) asked—that is, told me—well, that he loved me. He looked very handsome, too. He wore a how-tie, and it came undone and I tied it up for him."

"Fancy my marrying, dear, when you and I have had so little to do with young men; Noel will marry, I suppose; he's too nice to escape, and you will lose your heart to some dress-suit."

"How I do run on! You must excuse me: I am so happy I want everybody else to be in the same way."

"When are you coming home to your loving Rose?"

A late post brought this to Patsy, and she smiled and cried alternately and was altogether in such a state of excitement over it that she felt she must leave instantly for home. That, however, was impossible, and aunt was giving a party that night, too, at which she must appear as usual, and not fly about in natural Patsy fashion and vent her feelings. She must assume some of that artificiality which now seemed very distasteful, for among all those transient friends who would care that Rose, sweet sister Rose, was actually going to marry and brighten another home than the old one!

Patsy's excitement lent a sparkling mystery to her eyes that night, upon which more than one young eligible complimented her, and Patsy was as gay as though her heart concealed no homesick ache.

There was a pause in the dance, and Patsy, who sat listening to a young man bending above her with agreeable homage in voice and eyes, heard her aunt saying, "Ah, yes! My niece has often spoken of you. She is here," and before Patsy's astonished eyes appeared Noel, calm and dignified and adorning a dress-suit.

"Good-evening, Miss Haines. I—"

But he got no further, for Patsy, quite forgetting ceremony, further than to beg a hasty pardon of her attendant, who now said "Gad!" sprang up, seized his arm, and saying, "Noel, dear, dear Noel, is it really you?" bore him off to a sequestered corner, and sitting there, insisted upon knowing everything concerning home and himself, in a breath.



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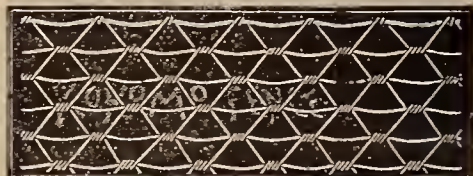
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SIOUX FALLS, S. D.—The seventh annual convention of the National Creamery and Buttermakers' Association which has just closed was the most successful ever held, there being 600 entries of butter and several thousand people in attendance. For the fifth time in succession the prize winning butter was colored with Wells, Richardson & Co.'s improved butter color, a marvelous proof of the superiority of this color.

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"Why is our girl homesick?" he inquired, in a sympathetic tone, whereupon Patsy with difficulty restrained a sob, and he launched into a lengthened account.

"And this has been my 'staff of life' in your absence," he concluded, gravely, drawing from his pocket a tiny bundle.

Patsy opened it and discovered a dried-up piece of dough in a crumbling morning-glory leaf.

"Do you recognize it?" he asked.

She answered, fervently kissing it, "It's the one I threw at you that morning! It's from home! I'm going to keep it!"

"There is only one way to do that, Patsy—by taking me, too. I've come for you, dear; I can't live without you."

Patsy's letter, next day, bore a postscript, in a masculine hand, saying: "Dear Rose, just fancy Patsy's being my 'w.' I tell her that the dress-suit did it, but she insists that it is only to possess a bit of dough, which you've been given the history of, that she assumes charge of me! NOEL."

"THE BROTHER OF THE GIRLS"

The power of enduring pain exhibited by the Nubians is almost incredible. This is strongly instanced in the competition by the youths of the villages for the championship of their camps.

It is a much-coveted honor to be called "Akhe Benat" (the brother of the girls), and the youth attaining the distinction is entitled to marry the belle.

The competition itself is a most agonizing spectacle. It commences by the maidens on certain festivals beating the drums to a peculiar time, which so excites the spirits of the young men that numbers of them rush into the arena, each loudly exclaiming, "I am the brother of the girls!"

They are then paired off by casting lots, and when stripped to the waist a powerful, flexible whip of hippopotamus-hide, five feet in length, is placed in the hand of each combatant, and at a certain signal a flogging-match commences.

The strokes are not given at random or in haste, but with the utmost deliberation, each youth delivering his blow in turn, and keeping time to the music. The long, pliant lash descends with keen precision, while the monotonous "hwt," "hwt," "hwt," goes on unceasingly, and the red streams tell the tale of suffering which the tongues disdain to proclaim. The one who can endure no longer falls fainting to the ground, and is borne away by his kinsmen.

The victors are subsequently pitted against each other till the remaining one becomes the champion, and bears the proud title of "The Brother of the Girls."—Harper's Magazine.

DEEP BREATHING

The art of inflating the lungs to their fullest capacity—in other words, the art of deep breathing—is an exercise that is more and more attracting the attention of those who realize the benefit and necessity of physical culture. Naturally, as the air makes food for the lungs, which make good blood, upon which depends the strength of the system, it is important to have good and abundant air for the lungs to utilize. It is a fact, however, attested by physicians, that the majority of people do not ordinarily fill the lungs in breathing. To overcome this tendency the habit of taking deep inspirations daily should be formed. Blaikie goes so far as to say that as many as one thousand or two thousand deep inspirations should be taken every day; but if those who are not accustomed to this exercise would begin with twenty-five, or even ten a day, it would be taking a step in the right direction. This number could be gradually increased. A tendency to consumption—that scourge of the human race—may be overcome; indigestion, fever, sea-sickness, and many other ills are declared to be helped, if not cured, by this treatment, and the benefit to all who persevere in the habit of taking deep and full inhalations of good air can scarcely be estimated.

This method is a simple one. Draw in the breath slowly through the nostrils—never through the lips—until every air-cell in the lungs is full. Hold the breath for a little time without straining, and then slowly expel it. Repeat this many times a day.

NEW NAME FOR AN OLD DISEASE

A contemporary claims that the gripe has been known and described since the days of Hippocrates, who was born B. C. 460. It was the French physicians who gave it the name which it now bears, but in the attempt to locate its origin it has been known as the Chinese catarrh, the Russian pest, the German disease, the Italian fever, and the Spanish catarrh. It has always taken the form of an epidemic catarrh, and has been attended with great loss of life in many of its visitations. It is agreed that it is occasioned by some particular condition or contamination of the atmosphere, but there is no agreement among medical men as to what the condition is or in what the contamination consists. The fact that it is largely due to atmospheric conditions seems to be established, according to our contemporary, from its appearance in London in 1847, where in a single day 500,000 persons were attacked. It appeared in New York in 1889, and its introduction was said to be due to germs conveyed in a letter from Russia. Its course ran on for six weeks, and resulted in hundreds of deaths. March, 1891, is fixed as the date of its next appearance, and this time it lasted eight weeks. While it lacked something of the impetuosity which distinguished its first visitation, it proved to be the most fatal of all the epidemics we have ever had. Since that time the severity of the disease has been gradually declining, but the disease itself has never been entirely eliminated until its recurrence this year.

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No. 330 College Bldg., Buffalo, N. Y.

BEE KEEPING

—Its pleasures and profits is the theme of that excellent and handsome illustrated magazine **Gleanings in Bee Culture**. We send a free sample copy and a Book on Bee Culture and Book on Bee Supplies, to all who name this paper in writing.

THE A. I. ROOT CO., MEDINA, OHIO.

PARKER'S HAIR BALM

Cleanses and beautifies the hair. Promotes a luxuriant growth. Never Fails to Restore Gray Hair to its Youthful Color. Cures scalp diseases & hair falling, 50c. and \$1.00 at Druggists.

Living on the Reputation of Others

"Take everything that I have but my good name; leave me that and I am content." So said the philosopher. So say all manufacturers of genuine articles to that horde of imitators which thrives upon the reputation of others. The good name of

Allcock's POROUS PLASTERS

has induced many adventurers to put in the market imitations that are not only lacking in the best elements of the genuine article, but are often harmful in their effects.

The public should be on their guard against these frauds, and, when an external remedy is needed, be sure to insist upon having Allcock's Porous Plaster.



It's a match for the most breechy Bull.

BULL-STRONG

The ordinary fence is not good enough. It takes something more than ordinary. Our Duplex Automatic Machine makes 100 varieties of fence at the rate of 60 rods per day. That brings the cost of a first class farm fence to only 15c. per rod. 19c. for poultry fence, 16c. for a rabbit-proof fence—excellent for

HORSE-HIGH

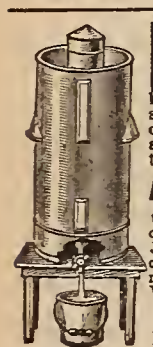
nurseries and orchards, and 12c. for a good hog fence. We sell you plain, coiled spring and barbed wire direct at wholesale prices. Don't buy wire or fencing until you get our free catalogue. We will save you money on all orders.

KITSELMAN BROS.
Box 225, Ridgville, Ind.

PIG-TIGHT

The Farmers HANDY WAGON Company,
SAGINAW, Mich.

are makers of Low-Down Wide-Tire FARM TRUCKS. Also METAL WHEELS for Old Farm Wagons, and All-Steel Trucks. Circulars Free.



BEATS THEM ALL

Beats the old shallow pan and the most improved deepsetting process because it gets more cream—a cleaner skimmer and is so much less trouble, it comes within the reach of everybody and requires no expensive power plant to run it. Our Improved Patent

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takes all the cream out of milk more cheaply than it can be done in any other way. Just as good for one cow as more. Sizes up to 40 cows. Prices, \$5. to \$11. Catalogue and testimonials FREE. They are good sellers. We want Agents in every locality.

AQUATIC CREAM SEPARATOR CO.
122 Factory Sqr. Watertown, N. Y.



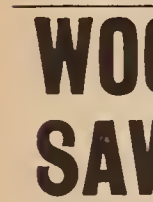
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Saddles \$43.50; Phaetons \$37;
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quality and workmanship. Buy direct from factory.
Save dealer's profits. We sell one or more as low as
others sell in car lots, and ship C. O. D. with privilege
of examination. Guaranteed as represented or money
refunded. Write for catalogue and testimonials FREE.
CASH BUYERS' UNION, 158 W. VanBuren St. B. 7, Chicago



A 12-Year Old Boy
can do more and better work with this
HAND CULTIVATOR
than three men with common
hoes. If no one in your town sells it,
send \$1.25 for sample, delivered.

ULRICH MFG. CO., 48, River St., Rock Falls, Ill.



WOOD SAWS

Our Smalley and Battle Creek self-feed Drag Saws are the standard of the world. Also all sizes of Circular Saws, and the celebrated B. C. Picket Mill Horse Powers for operating. Silo Machinery, Feed Mills, Root Cutters, Corn Shellers.

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SMILES



HORATIUS UP TO DATE

The great Carl Schurz of Gotham
By foreign gods he swore
That the land that had annexed him
Should annex nothing more.
By foreign gods he swore it.
And named a trysting day,
And haid his messengers ride forth,
East and west, and south and north,
To summon his array.

Lo, on the day appointed
There came a motley crew,
Potato's henchman, Pingree,
The hounding Pettigrew;
The Vest, that's out of fashion;
Godkin, high priest of hate;
Edward, he of cashless feed—
Ed, whose oven is all you need—
From the Bay-spectacled State.

Then outspake brave Carl Schurz,
"This hattle must begin;
The people are against us,
And we must fight like sin.
In the Senate pass the people's will
May perhaps he stopped by three;
Now, who will stand on either hand,
And filibuster with me?"

Outspake Pettigrew, the Dakotan,
A talker brave was he,
"Lo, I will stand on thy right hand
And waste good time with thee."
Then outspake Vest, the Missourian,
A spendthrift of words was he.
"Lo, I will stand on thy left hand,
And filibuster with thee."

But here the parallel endeth;
Some things history does not repeat;
The Narrow-Minded Regiment
Was swept from off its feet.
There'll be no graven image,
No statute set on high,
No tales of the new Horatius,
When the winds round the chimney sigh.
And the end of these poor creatures,
Who got in the way of fate,
Is like the cow who strayed on the track
And saw the train too late.

—J. B. Reynolds, in New York Sun.

THE SAME OLD COLLAR-BUTTON

ONE of the funniest things I ever saw," said a young lady recently to a reporter, "happened up in our church one Sunday evening during services.

"Sitting right in front of me was a woman and her son, a boy about eighteen years of age. During the sermon the boy would drop asleep every few minutes, and his mother would nudge him and wake him up. During the course of his noddings the boy's collar came up on one side, and the end pointed out over the congregation like the index finger of a hand on a sign-board at the junction of two country roads.

"The young man immediately noticed that his collar was flapping, and attempted to fasten it in place, but found that the collar-button had disappeared. He was terribly frustrated, and glanced about in a wild-eyed sort of way as if he were surrounded by the enemy and was looking for a chance to escape.

"In the meantime he began making mad thrusts with hands down the back and front of his shirt in a vain attempt to find the missing collar-button. So conspicuous were his efforts that everybody in a radius of twenty feet had his attention attracted to him. This fact was not lost on the young man, and his face grew redder and his exertions to find the collar-button became more desperate.

"The fact that people are not supposed to laugh during the church services made it all the more difficult for people to restrain their smiles. Their efforts to control their irresistibilities were so manifest that it needed only one person to laugh to cause a general explosion.

"I don't know who laughed first, but suddenly fifty persons were laughing behind handkerchiefs and hats in the most immoderate fashion. The young man finally gave up the search for the collar-button, and his mother gave him a pin to keep the collar in place."—Duluth News-Tribune.

BIRDIE'S APPETITE

"Have you met Mr. Woolly, the Western millionaire?" asked the sharp-faced young lady.
"Oh, yes!" replied the plump one; "he took me in to dinner at Mrs. Hytome's last night. He was quite gallant, and remarked upon my bird-like appetite."

"Indeed, dear! Well, he's a good judge. You know he runs an ostrich-farm in California."—Catholic Standard and Time.

NO RECIPROCITY

"Hopkins is the meanest man on earth."
"Why?"
"I rode down town with him this morning and let him tell me all about his sufferings with the grip, but when I began to tell mine he got off the car."—Chicago Record.

A PEEP INTO THE FUTURE

Year 1940.
The haughty agriculturist of the tropics looked contemptuously at the man who groveled at his feet.

"Now," he exclaimed, with scorn. "I won't."
"You will not take \$10,000,000 for it?" tremblingly asked the man who groveled.
"Now!" contemptuously repeated the haughty agriculturist. "My price is \$50,000,000."
"Make it \$20,000,000!" pleaded the other.
"You weary me."
"Say \$35,000,000."

"I think I told you," said the agriculturist, with a yawn, "that it would cost you exactly \$50,000,000—no more and no less. I wouldn't sell for \$49,999,999.99."

"But think," implored the other, "what an immense sum \$45,000,000 would be! I am authorized to go as high as that—\$45,000,000 in cash!"

"You are authorized to go as high as I ask. You know you are. And you'll pay me my price. What's the use of your wasting any more time? You will pay me \$50,000,000, cash down, or you don't get it. See?"

With a heart-breaking sigh the man who had been groveling rose to his feet, made out a check for the required sum, and handed it over.

He was the agent for an automobile and bicycle syndicate.

And he had just bought the last rubber-tree on the globe.—Chicago Tribune.

WOMAN BURIED WITH HONORS INTENDED FOR A GENERAL

A queer telegraphic correspondence was carried on recently between the capitals of Saxony, Bohemia and Russia. Somebody or other in Dresden had a maiden aunt who was taken sick and died in a hospital at Prague while on her way to Vienna. The nephew was notified, and he telegraphed to the Prague hospital authorities to send the body to Dresden for entombment in the family vault. When the coffin on its arrival was opened it was found to contain not the body of the aunt, but that of a uniformed and bedizened Russian general. Immediately the nephew wired to Sprague:

"No dead aunt, but Russian general. Where dead aunt?"

From Prague came the reply:

"If dead aunt not arrived, then Petersburg."

The next telegraph went to the railway authorities at St. Petersburg, and read:

"What do with Russian general? Where is dead aunt?"

And from St. Petersburg was received the characteristic reply:

"Bury general in all silence. Aunt just buried here with highest military honors."—Chicago Record.

ALL-AROUND CHURCH DIFFERENCES

"How do the two churches here get along?" asked the drummer, who was new to the place.

"Mister," said the village skeptic, "they air so eternally at outs that even the weather-vanes never points the same way."—Indianapolis Journal.

ONE MASCULINE TRAIT

Gwilliams—"Mrs. Blingo always strikes me as being such a masculine woman."

Mrs. Gwilliams—"She is. She can't stand the least bit of pain without making a big fuss over it."—Chicago Daily Tribune.

ODDS AND ENDS

He who kisses a maid kisses a miss; and he who kisses another man's wife kisses amiss; so the only thing left for a man is widows.

At a recent concert, the conclusion of which was the song "There is a good time coming," a farmer rose in the audience and said:

"Mister, you couldn't fix the date, could you?"

Mrs. Bloombur—"How did the detectives happen to suspect him, disguised as he was in women's clothes?"

Bloombur—"He passed a milliner's window without looking in."

"Have you put up much fruit this season?" asked the young housekeeper.

"There is no use, with my two boys in the house," replied the neighbor. "They have eaten everything we have."

"Except the door-jam," added her husband.

Sandy—"Mac, I hear ye have fallen in love wi' bonnie Katie Stevens."

Mac—"Weel, Sandy, I was near—verra near—daein' it; but I found the lassie had nae siller, so I said to myself, 'Mac, be a mon!' And I was a mon, and noo I pass her by wi' silent contempt."

Edith—"Papa's mind is full of business all the time."

Mama—"How does that trouble you?"

Edith—"Well, when Harry asked him for me, he said, 'Yes, take her away; and if she isn't up to our advertisement, bring her back and exchange her.'"

DANGER IN SODA

Serious Results Sometimes Follow Its Excessive Use

Common soda is all right in its place and indispensable in the kitchen and for cooking and washing purposes, but it was never intended for a medicine, and people who use it as such will some day regret it.

We refer to the common use of soda to relieve heartburn or sour stomach, a habit which thousands of people practice almost daily, and one which is fraught with danger; moreover the soda only gives temporary relief and in the end the stomach trouble gets worse and worse.

The soda acts as a mechanical irritant to the walls of the stomach and bowels and cases are on record where it accumulated in the intestines, causing death by inflammation or peritonitis.

Dr. Harlandson recommends as the safest and surest cure for sour stomach (acid dyspepsia) an excellent preparation sold by druggists under the name of Stuart's Dyspepsia Tablets. These tablets are large 20 grain lozenges, very pleasant to taste and contain the natural acids, peptones and digestive elements essential to good digestion, and when taken after meals they digest the food perfectly and promptly before it has time to ferment, sour and poison the blood and nervous system.

Dr. Wuerth states that he invariably uses Stuart's Dyspepsia Tablets in all cases of stomach derangements and finds them a certain cure not only for sour stomach, but by promptly digesting the food they create a healthy appetite, increase flesh and strengthen the action of the heart and liver. They are not a cathartic, but intended only for stomach diseases and weakness and will be found reliable in any stomach trouble except cancer of the stomach. All druggists sell Stuart's Dyspepsia Tablets at 50 cts. per package.

A little book describing all forms of stomach weakness and their cure mailed free by addressing the F. A. Stuart Co., of Marshall, Mich.



Why Buy!

An Old Style Hay Carrier when you can get the Latest Improved LOUDEN, worth more than twice as much. The Strongest Lasts Longest. Takes Least Room, and Works Best. Gold Medal at Omaha. Write for "Pointers," showing

Superior Merits. Also circular of Best Barn Door Hanger on Earth, "How to Build Hay Barns," etc. **LOUDEN MACHINERY CO., FAIRFIELD, IOWA.**

A DOLLAR SAVED

is a dollar earned. You can both earn it and save it if you use the

SCIENTIFIC GRINDING MILLS.

Save it when you grind your own grain and earn it when you grind for your neighbors. Four sizes for steam power; others for horse power. Free catalogue. **FOOS MFG. CO., Springfield, O.**

A CORD AN HOUR NO WET KNEES. NO BACK ACHE.

Sawyer's weight does half the work. Fastest, easiest, cheapest and best one-man saw in the world. Cuts both ways.

Agents Wanted. Ask for Catalogue T **FAMOUS MFG. CO., CHICAGO, ILL.**

Bicycles \$13

Complete and ready to ride. Take an agency, sell Bicycles and make big money. You can sell lots of them. We sell only one agent in a place. Send quick for 1 color catalogue and confidential prices. **AMERICAN MACHINE CO., FLINT, MICH.**

SPRAY PUMPS

ALL BRASS

\$17 outfit for \$6 exp. paid. Will spray a 10 acre orchard per day. 75,000 in use. Satisfaction guaranteed or Money refunded. Illd. catalogue free. Agents make from \$25 to \$150 per day. New improvements for '99. Free Trial. **P. C. LEWIS MFG. CO., Catskill, N.Y.**

SPRAY PUMPS

Save your fruit and make you money. "THE DAISY" is 15 years old and unchanged in use. Has every improvement—rubber hose, perfect nozzles and valves. No. 1, tin, \$1.50; No. 2, iron, \$2; No. 3, all brass, \$4. We pay express. Agents wanted. Catalogue free. **W. M. Johnston & Co., Box 28, Canton, O.**

BALL BEARING BONE CUTTER

Runs easier than any cutter made. A woman or child can operate it if necessary. Endorsed by all leading poultry authorities. Formerly the Premier, now the ADAM. Get circulars and prices at once. **W. J. ADAM, Joliet, Ill.**

BICYCLE FREE OR CASH TO ANY ONE distributing my soaps, etc. I trust you. **F. Parker, 277 E. Madison St., Chicago, Ill.**

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and are always the
BEST THAT GROW!

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BURPEE'S Farm Annual

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A handsome new book of 176 pages,—tells
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Write a postal card TO-DAY!

W. ATLEE BURPEE & CO., Philadelphia

15 Packets FLOWERS 20 Fine SEEDS. BULBS



For 25c. we will send
the following collection
of SEEDS and
BULBS. All large
packets and good
blooming bulbs.
1 Pkt. Salvia, mass of
red bloom.
1 " Heliotrope,
very sweet.
1 " Chinese Lan-
tern, bright
red fruit.
1 " Weeping Palm.
1 " Aster, new
Giant White.
3 " Pansy, red,
white, blue.
1 " Sweet Pea, red.
1 " Lavender, old favorite, delightfully fragrant.
1 " Myosotis, beautiful blue Forget-me-nots.
1 " Butterfly Orchid, covered with flowers all year.
1 " Verbena Mixed, new and dwarf, very fine.
1 " Petunia, fringed mixed, curved and twisted.
as follows: 1 Begonia, 1 Anemone, rare,
1 Spotted Calla Lily, 2 Montbretias, red,
1 Hyacinth, summer flowering; 1 tuberose, double,
3 Gladiolus, 1 Butterfly, 1 dwarf white, The Bride,
1 Scarlet, and 10 other beautiful flowering bulbs.
15 Packets Seeds and 20 Bulbs in all for 25c.,
postpaid, with our new illustrated catalogue.
J. ROSCOE FULLER & CO., Floral Park, N. Y.

\$1.95 MEN'S PANTS. SEND NO MONEY.
Cut this ad. out and send to us, state your
HEIGHT and WEIGHT, number inches around
body at waist (pants waist band), around
body at hips, largest part, also length of
pants leg, inside seam, from tight in
crotch to heel, state whether you wish
LIGHT, MEDIUM or DARK GOODS. We
will send you these pants (to your
measure) by express, C.O.D., subject
to examination, examine them at
your express office, and if found per-
fectly satisfactory, and equal to pants
that others sell at \$4.00 to \$6.00, pay your
express agent our special offer price, \$1.95
and express charges. These PANTS
are made on the latest patterns, by
expert tailors, made from high-grade
special, wear-resisting, wool pants fab-
rics, in LIGHT, MEDIUM or DARK Shades,
finest trimmings, patent never-to-come-
off buttons, silk and linen sewing, finest
work throughout; 2,500 to go at \$1.95.
Order at Once. Don't Delay.
We Send Free Cloth Samples of Men's
made-to-measure Pants,
\$1.50 to \$4.00; suits \$5.50 to \$12.00;
also tape measure, fashion plates, etc.
Write for Free Sample Book No. 5. E. Address.
SEARS, ROEBUCK & CO., (Inc.), CHICAGO, ILL.

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SEEDS**
were famous years ago—their fame
grows every year—as the seeds
most to be relied on—as always
the best. For sale by leading
dealers everywhere. Five cents
per paper and always worth it.
Insist on having them. Run
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1899 Seed Annual is free.
D. M. FERRY & CO.,
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300 ACRES—61 YEARS.
Superior stock of all desirable
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Apples, Pears, Peaches, Plums;
shade and ornamental trees; small
fruit plants, etc. Catalogue free.
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Parry, New Jersey.

The best, handiest, easiest
running, cheapest and
most durable
**FLY SHUTTLE
Carpet Loom**
in the world. 100 yards
a day. Catalogue free.
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Goods sent to reliable persons to be paid
for after selling. The Electricity from
the batteries will turn a needle through
your table or hand. Cures rheumatism,
liver and kidney disease, weak and lame
back, etc. For advertising purposes will
give one half free to one person in each
locality who is willing to introduce them.
Address F. J. SNEAD & CO.,
Dept. No. 240,
VINELAND, N. J.

\$3 a Day Sure
Send us your address
and we will show you
how to make \$3 a day
absolutely sure, we
furnish the work and teach you free, you work in
the locality where you live. Send us your address and we will
explain the business fully, remember we guarantee a clear profit
of \$3 for every day's work, absolutely sure, write at once.
ROYAL MANUFACTURING CO. Box 683, DETROIT, MICH.

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SORE EYES USE
DR. ISAAC THOMPSON'S EYE WATER

OUR MISCELLANY

BAYEUX TAPESTRY

BAYEUX tapestry is mythically said to have
been wrought by Matilda, queen of William
I., or to have been made under the direc-
tion of his brother Odo, bishop of Bayeux.
It is nineteen inches wide, two hundred and
fourteen feet long, and is divided into compart-
ments showing the events from the visit of Harold
to the Norman court to his death at Hastings. It
is now preserved in the public library of Bayeux,
near Caen. A copy, drawn by C. Southard, and
colored after the original, was published by the
Society of Antiquaries in 1821-23. It was repro-
duced by autotype process by F. R. Fowke, with
notes, in 1875.—New York Tribune.

MILLIONS OF DOLLARS

Will be put into the pockets of farmers and gar-
deners by using the New Process Mfg. Co.'s New
Discovery to kill all germination of weed seeds in
the ground. The processing is done just before
planting or sowing. The article used is obtainable
in every household, can be prepared without one
cent of money. Every farmer and gardener
should write to us at once and get full particulars.
Address New Process Manufacturing Co., Lin-
coln, Kansas.

WHOOPIING-COUGH BACILLUS

An Italian investigator, Professor Livio Vin-
cenzi, at Sassari, claims to have discovered the
above. He found it in the expectorations of
children suffering from whooping-cough, in some
cases it being present in a very large quantity,
while it was absent in other processes of sickness.
Professor Vincenzi ascertained by a series of
researches the peculiar qualities of the little or-
ganism, but he did not succeed in causing by
inoculation on animals the same disease as in
human beings. It is, however, a well-known fact
that whooping-cough never occurs in animals.—
Public Opinion.

CONSUMPTION CURED

An old physician, retired from practice, had placed
in his hands by an East Indian missionary the formula
of a simple vegetable remedy for the speedy and per-
manent cure of Consumption, Bronchitis, Catarrh,
Asthma and all Throat and Lung Affections; also a pos-
itive and radical cure for Nervous Debility and all Ner-
vous Complaints. Having tested its wonderful curative
powers in thousands of cases, and desiring to relieve
human suffering, I will send free of charge to all who
wish it, this recipe, in German, French or English, with
full directions for preparing and using. Sent by mail,
by addressing, with stamp, naming this paper, W. A.
NORRIS, 320 Powers' Block, Rochester, N. Y.

HE NEEDED HANDS

Little Ruth was looking out of the window at
the baker's horse. "Mama," she said, "doesn't
a horse use two of his legs for hands?"
"Why, no," mama answered. "A horse doesn't
need hands as we do."
"But, mama," the little girl persisted, "I don't
see what he does when his nose itches."—Boston
Gazette.

Dr. D. Jayne's famous prescription for
Lung and Throat Diseases is still sold under
the name of Jayne's Expectorant.

RECENT PUBLICATIONS

CATALOGUES RECEIVED

Miss C. A. Lippincott, Minneapolis, Minn. Hand-
some catalogue of flower-seeds.
J. A. Everitt, Indianapolis, Ind. Catalogue of
"O K" seeds and other specialties.
L. E. Archias & Bros., Carthage, Mo. Sixteenth
annual rural guide and seed catalogue.
Geo. S. Singer, Cardington, Ohio. Illustrated
catalogue of Olentangy incubators and brooders.
J. M. Edwards & Son, Fort Atkinson, Wis.
Illustrated catalogue of hardy fruits and ornamen-
tals.
J. L. Normand, Marksville, La. Catalogue of
rare figs, cross-bred plums, and ornamental plants
and vines.
Johnson & Stokes, Philadelphia, Pa. Garden
and Farm Manual for 1899—"Seeds direct from
the growers."
D. M. Ferry & Co., Detroit, Mich. Complete
catalogue of best seeds of standard varieties for
garden and farm.
Geo. Ertel & Co., Quincy, Ill. Catalogue of Vic-
tor incubators and brooders. The Victor does
twenty hens' work.
The Storrs & Harrison Co., Painesville, Ohio.
Nursery, floral and seed catalogue. Plants, trees,
vines and seeds by mail a specialty.
Green's Nursery Co., Rochester, N. Y. Green's
Fruit Instructor. Special offer, the "Mortgage
lifter collection" of valuable, standard fruits.
S. L. Allen & Co., Philadelphia, Pa. The "Planet,
Jr., Book," illustrated with many half-tone pictures
of the Planet, Jr., implements at work in garden,
field and orchard.
H. N. Buckbee, Rockford, Ill. Seed and Plant
Guide for 1899. Among specialties offered are the
Strawberry muskmelon and Dewey's favorite
carnation collection.
James Vick's Sons, Rochester, N. Y. Vick's
Garden and Floral Guide. Golden-wedding edi-
tion, elegant, complete and beautifully illustrated
with colored plates and half-tones.
Studebaker Bros. Mfg. Co., South Bend, Ind.
Handsome pamphlet describing the Studebaker
vehicle works, a plant covering ninety-eight acres,
and the largest of its kind in the world.

A NEW METHOD OF MEDICAL SCIENCE

Facts About the New Slocum Treatment for Weak
Lungs, Consumption and All Cold
Weather Diseases

OLD CONDITIONS MET IN A NEW WAY

Consumption Cured and Weak Lungs Restored by this Far-
Famed Treatment, a Course of Which is Offered
Free to Every One of Our Readers

Worthy of all honor and respect is
the studious physician who spends his
life in a continual combat with disease.

Through Dr. Slocum you may now
consider yourself free from the dread
engine of destruction which threatened
to carry away your life.

You need not fear consumption.

It can be cured.

And those diseases of weak lungs and
the respiratory organs, which pave the
way for the baneful bacillus, need not
be allowed to become chronic.

They can be cured, too.

The new Slocum System of Treatment
charms away every system of these
disorders quickly, surely, and thor-
oughly.

The treatment is simple, pleasant,
harmless and adapted to all ages.

It does not interfere with your daily
employment, or your food.

It consists of three remedies which
are used simultaneously and supplement
each other's curative action.

To those of our readers who wish to
test it a complete free course of treat-
ment will be sent them direct from the
Slocum Laboratories on request.

Merely send your name and full ad-
dress to Dr. T. A. Slocum, 98 Pine St.,
New York, when the three free bottles
will be forwarded you, together with
free advice on your case.

Every first-class druggist dispenses the
Slocum System of Treatment in original
packages, with full directions for use.

If you suffer from any of the dangerous
cold weather diseases, here is a chance
for you to test for yourself the workings
of a system of medicine which has never
yet failed. Please mention reading this
article in FARM AND FIRESIDE when
writing Dr. Slocum.

SEND NO MONEY

you OUR HIGH-GRADE BURDICK SEWING MACHINE by freight
C. O. D., subject to examination. You can examine it at your near-
est freight depot and if found perfectly satisfactory, exactly as
represented, equal to machines others sell as high as \$50.00,
and THE GREATEST BARGAIN YOU EVER HEARD OF, pay
your freight agent Our Special Offer Price \$15.50
and freight charges. The machine weighs 120
pounds and the freight will average 75 cents for each 500
miles. GIVE IT THREE MONTHS TRIAL in
your own home, and we will return your \$15.50 any day
you are not satisfied. We sell different makes and grades of
Sewing Machines at \$3.50, \$10.00, \$11.00, \$12.00 and up, all of
which are fully described in Our Free Sewing Machine Cat-
alogue, but \$15.50 for this 7-DRAWER BURDICK
is the greatest value ever offered by any house.
THE BURDICK has every modern improvement, every
good point of every high-grade machine
made, with the defects of none. Made by the best maker in America.
SOLID OAK CABINET, BENT COVER. Latest 1899 Skeleton frame, piano
polish, finest nickel drawer pulls, rests on 4 casters, ball bearing
adjustable treadle, genuine Smith's treadle, finest large high
arm head made, positive four-motion feed, self threading vibrating
shuttle, automatic bobbin winder, adjustable bearings, patent
tension liberator, improved loose wheel, adjustable presser
foot, improved shuttle carrier, patent needle bar,
patent dress guard.

GUARANTEED the lightest running, most durable
and nearest perfect machine made. Every known
attachment is furnished on our Free Instruction
Book tells just how anyone can run it and do either
plain or any kind of fancy work. A 20-YEAR
GUARANTEE is sent with every machine.

IT COSTS YOU NOTHING to see and examine this machine, compare it with those your storekeeper sells at
\$40.00 to \$50.00, and then if convinced you are saving \$20.00 to \$35.00,
pay your freight agent the \$15.50. WE TO RETURN YOUR \$15.50 if at any time within three months you say you
are not satisfied. ORDER TO-DAY. DON'T DELAY.

WRITE FOR FREE CATALOGUE.

WITH YOUR ORDER, cut
this Ad. out and send
to us, and we will send



SEARS, ROEBUCK & CO., CHICAGO, ILL.

WHAT'S THE DIFFERENCE

Between our cabinet and other makes? These
cups speak plainer than words. Our New
1900 Style Quaker Folding Bath Cabinet
has a Door, has a self-supporting steel frame,
galvanized, covering of antiseptic, hygienic
cloth, rubber lined. Cabinet does not rest on
the shoulders, nor pull over your head. No
need to stoop to step in. No need to stoop to
step out. Step in, bathe, cool off, step out. Only
perfect cabinet made. Folded, it is 3 inches
thick, 15 inches wide, 16 inches long, weighs
only 5 pounds. Patented. \$26,000 sold.
Recommended by Best Physicians for
bathing purposes. It opens the pores, sweats
out the poisons, makes you clean, strong, vig-
orous and healthy. Cures bad cold with one
bath. Cures rheumatism, laceration, insomnia,
obesity, female troubles, all blood, skin, nerve
and kidney diseases. Immediate relief guar-
anteed in worst cases. Cabinet, Frame, Stove, Formulas and
Directions sent anywhere upon receipt of \$5.00. Face steaming
attachment \$1.00 extra. Order to-day. You won't be disappointed. It's guaranteed as represented or money refunded.
We are responsible. Capital \$100,000. Largest manufacturers of Bath Cabinets in the world. Write us anyway.
Our Valuable Descriptive FREE
Book, Testimonials, Etc. \$100.00 A MONTH AND EXPENSES
Address E. T. WORLD MANUFACTURING CO., Cincinnati, Ohio.

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SILK REMNANTS FOR CRAZY WORK.

A big package of beautiful Silk Remnants, from 120 to 150 pieces, all carefully trimmed, prepared from a large
accumulation of silks especially adapted for all kinds of fancy work. We give more than double any other offer, and the
remnants are all large sizes, in most beautiful colors and designs. With each assortment is four skeins of the very best
embroidery silk, assorted colors. Send 25 cents in silver or stamps to Paris Silk Agency, Box 3045, N. Y. City, N. Y.

No Money in Advance!

VIOLINS, MANDOLINS, GUITARS
and other musical instruments sent C.O.D. subject to
examination without payment in advance. Buy direct
from factory at wholesale prices. Save dealers' large
profits. Here are three leaders that cannot be dupli-
cated anywhere. A sweet-toned Mandolin \$4.00.
Equal to others sold by dealers at \$8.00. A high-
grade, handsomely finished, \$6.00 Guitar for \$2.90.
An \$8.00 Stradivarius model Violin including Out-
fit of bow, case, rosin, extra set strings and in-
struction book for \$3.15. Banjos \$1.25 and up;
Music Boxes \$5.00. Cornets \$6.25. Pianos \$125.00;
Organs \$21.75 and up, sent on 30 days free trial at
factory prices. Large Musical Instrument, Piano
and Organ Catalogue FREE, explaining all
about our "no money in advance plan."

CASH BUYERS' UNION,
160 W. Van Buren St., B-7, Chicago, Ill.

740 Silk Prince Cards, Love, Transparent, Etc.,
Acquaintance Cards, LAUGHING CAMERA,
Prize Puzzles, New Games, Magical Illusions,
Etc. Finest Sample Book of **CARDS** Biggest list of
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All for 5c. stamp. OHIO CARD CO., Cadiz, Ohio.

PILES
Instant relief: final cure in a few days.
Never returns: no purge; no salve;
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Address C. J. MASON, Box 519, NEW YORK, N. Y.

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We want every quilter to
have our book of 400 De-
signs, containing the prettiest,
quickest, scarcest, most pro-
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cabin to stars and puzzle de-
signs. All sent, postpaid, for
10 cents. 7th revised edition;
beautiful, unique.

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We want one shrewd,
careful man in every
town to make a few
thousand dollars for
himself quietly at home
and not work hard.
Private instructions
and valuable outfit of
samples sent FREE. Address immediately, P. O.
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The best Red Rope Roofing for
1c. per sq. ft., caps and nails in-
cluded. Substitutes for Plaster.
Samples free. THE FAY MANILLA ROOFING CO., Camden, N. J.

Potash.

ENOUGH of it must be contained in fertilizers, otherwise failure will surely result. See that it is there.

Our books tell all about fertilizers. They are sent free to all farmers applying for them.

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FROM MAKER TO USER DIRECT AT WHOLESALE PRICES



BUY DIRECT AND SAVE MONEY.

"Money saved is money earned." We make a complete line of Buggies, Phaetons, Buggies, Spring Wagons and Road Wagons, and sell them to you direct at wholesale prices.

Best Spring Wagon Made.
Two and three seat. Some styles as low as \$37.60.

C. B. Mattheis, Mfg. Co., writes: "Received No. 923 Combination Spring Wagon in fine shape. Consider I saved \$25.00 by dealing with you."

YOU are NOT too far away to do business with us and save money. Send for new illustrated catalogue—FREE. All prices marked in plain figures. Complete line of harness \$4.80 and upward.

EDWARD W. WALKER CARRIAGE CO.,
20 Eighth St. Goshen, Indiana.

SEND US ONE DOLLAR and this ad. and we will send you this big \$25.00 new 1899 pattern high grade RESERVOIR COAL AND WOOD COOK STOVE by freight C. O. D., subject to examination. Examine it at your freight depot, and if found perfectly satisfactory and the greatest stove bargain you ever saw or heard of, pay the freight agent our SPECIAL PRICE, \$13.00, less the \$1.00 sent with order, or \$12.00 and freight charges. This stove is size No. 8; oven is 16x18x11; top is 42 by 23; made from best pig iron, extra large flues, heavy covers, heavy linings and grates, large oven shelf, heavy tin-lined oven door, handsome nickel-plated ornamentations and trimmings, extra large deep genuine standard porcelain-lined reservoir, handsome large ornamental base. Best coal burner made, and we furnish FREE an extra wood grate, making it a perfect wood burner. WE ISSUE A BINDING GUARANTEE with every stove, and guarantee safe delivery to your railroad station. Your local dealer would charge you \$25.00 for such a stove; the freight is only about \$1.00 for each 800 miles, so we save you at least \$10. Address SEARS, ROEBUCK & CO. (Inc.), CHICAGO, ILL.



ACME BIRD

WRITE FOR OUR BIG FREE STOVE CATALOGUE

SUPERIOR ON WHEELS

As Easy to Manage as a Road Cart

DISC HARROW

A PERFECT HARROW AND PULVERIZER.

Independent Discs. One Man or Boy easily Operates it under all conditions.



THE SUPERIOR DISC HARROW ON WHEELS is the one you should buy. You don't dull the discs going over the pike. You don't have to load it into a wagon to move it from one field to another. If you are interested write for Harrow Folder A which tells about it. Address, **SUPERIOR DRILL CO.** Springfield, Ohio.

FAT

How to Reduce It

Mrs. L. Lanier, Martin, Tenn., writes: "Reduced my weight 2 lbs. in 15 days without any unpleasant effects whatever." Purely vegetable, and harmless as water. Any one can make it at home at little expense. No starving. No sickness. We will mail a box of it and full particulars in a plain sealed package for 4 cents for postage, etc.

HALL CHEMICAL CO. B Box St. Louis, Mo.

BUCKEYE CHEMICAL DEHORNER

MOST HUMANE DISCOVERY OF THE AGE

Don't use clippers and saws. Their use is inhuman. Through years of experimenting we have devised, and thoroughly tested, a Medicine which will effectually kill the growth of horns on calves. By simply cauterizing the horns as soon as they appear, and applying our solution, you nip them in the bud, and without injury to your stock. It commends itself to the use of all cattle-breeders. Give your post and express office when ordering. \$1 per bottle; 6 bottles \$5. Made only by

THE BUCKEYE CHEMICAL CO.
Lock Box 491, Washington C. H., Ohio.

FOR COOKING PANS Etc.

Instantly attached and detached. Sells on sight. Mailed for 15 cents. AGENTS WANTED. LIFT Fox & Co., Depl. B, Herald Bldg., Chicago.

PILES

Absolutely cured. Never to return. A Balm to Sufferers. Acts like Magic. Trial box MAILED FREE. Address, Dr. E. M. BOTOT, Augusta, Maine.

\$525

Agents' profit per month. Will prove it or pay forfeit. New articles just out. A \$1.50 sample and terms free. Try us. Childsater & Son, 28 Bond St., N. Y.

WIT AND HUMOR

THE NEW BOY

Did y' ever stop your ears up,
'Nd listen to your teeth,
As they dance 'nd clack 'nd clatter
On the crackers underneath?
Kin y' make your ears go wabbly
Like a donkey when he brays?
I'll bet y' ca'n't make both your thumbs
Go roun' two different ways!

Kin y' yawn as if y' liked it,
With your mouth shet tight?
Y' don' know how t' cluck your tongue—
Naw, that ain't right!
Kin y' whistle on two fingers,
Like a ninging callin' "coal?"
Say—lemme see your sling-shot—
You got a fishin'-pole?

Y' ca'n't stan' on your head-'n'-han's
'Thout a wall to prop—
D' y' ever go in swimmin'
An' never tell your pop?
The teacher's watchin' both of us—
She's on to me, I gues'—
'F she keeps me in fr' talkin' t' you
I'll—lick you at recess!

—Harrison Eastman Patten, in Child Study Monthly.

SURE TO GET IT MENDED

"It is strange that I can't get my wife to mend my clothes," remarked Mr. Bridle, in a tone of disgust. "I asked her to sew a hutton on this vest this morning, and she hasn't touched it."

"You asked her!" said Mr. Norris, with a slight shrug of his shoulders.

"Yes. What else should I do?"

"You haven't been married very long, so perhaps you'll take a tip from me," answered Mr. Norris, with a fatherly air. "Never ask a woman to mend anything; that's fatal."

"Why, what do you mean?"

"Do as I do. When I want a shirt mended, for instance, I take it in my hand and hunt up my wife. 'Where's that rag-bag, Mrs. Norris?' I demand, in a stern voice."

"What do you want a rag-bag for?" she says, suspiciously.

"I want to throw this shirt away; it's all worn out," I reply.

"Let me see," she demands.

"But I put the garment behind my back."

"No, my dear," I answer. "There is no use in your attempting to do anything with it."

"Let me see it," she reiterates.

"But it's all worn out, I tell you."

"Now, John, you give me that shirt!" she says, in her most peremptory tone.

"I hand over the garment."

"Why, John Norris," she cries, with womanly triumph, "this is a perfectly good shirt. All it needs is—"

"And then she mends it."

WORTH LIVING FOR

Hobson kissed me when we met—
It was at a large reception;
I was one of many, yet
I'll admit, without deception,
That although I'm fat and fair,
Forty, too, and Love has missed me,
I can die without despair—
Hobson kissed me.

A GENTLE HINT

Old lady—"Now, porter, you're quite sure you've put all my luggage in—the big portmanteau and—"
Porter—"All right, mum."

Old lady—"And you're certain I've not left anything behind?"

Porter—"No, mum; not even a copper."

DEFINITION OF A BABY

"A baby," says Israel Zangwill, "is a joy to its mother, an heir to its father, a charge to its nurse, a soul to the clergyman who baptizes it, a new biological specimen to the physician, a new customer to the shop-keeper and a nuisance to the neighbors."

LEVITY

Here the lecturer grew earnest.
"I am convinced," he exclaimed, "that the woman who does her own cooking is more likely to find a place among the angels than the woman who doesn't."

Now a voice obtruded itself harshly.
"If she cooks with gasoline," said the voice.—
Boston Journal.

LITTLE BITS

Dill—"In what respect does Spain excel all other nations?"

Jill—"Why, Spain has the finest submarine navy in the world."

"My doll can shut her eyes and go to sleep just lovely."

"Huh! My doll never goes to sleep at all; she's got insomnia."

"What is the meaning of the word 'tantalizing'?" asked the teacher.

"Please, ma'am," spoke up little Johnny Holcomb, "it means a circus procession passing the school-house, and the pupils not allowed to look out."—Vanity Fair.

CLOTHING SALESMEN WANTED.

\$150.00 PER MONTH AND EXPENSES MADE BY ALL OUR ACTIVE MEN. WE PAY MANY FAR MORE.

WE WANT MEN IN EVERY COUNTY in the United States. If your reference is satisfactory we will start you at once. No experience necessary. No capital required. We furnish a full line of samples, stationery, etc. A tailor's-for-the-trade complete outfit ready for business. NO COMMISSION PLAN. You regulate your profits to suit yourself. No house to house canvass. This is not one of the many catch advertisements for agents, but one of the very few advertisements offering a rare opportunity to secure strictly high-grade EMPLOYMENT AT BIG WAGES.

We are the LARGEST TAILORS in America.



We make to measure over 300,000 suits annually. We occupy entire one of the largest business blocks in Chicago. We refer you to the First Exchange National Bank in Chicago, any Express or Railroad Co. in Chicago, any resident of Chicago. Before engaging with us, write to any friend in Chicago and ask them to come and see us, then write you if it is a rare opportunity to secure steady, high-class, satisfying employment. Better still—come to Chicago yourself and see us before engaging and satisfy yourself regarding every word we say. You can get steady work and big pay. Work in your own county \$800 a year and you can't make less than \$5 every day above all expenses. WE WANT TO ENGAGE YOU to take orders for our Made-to-Order and Measure Custom Tailoring, (Men's Suits, Pants and Overcoats). We put you in the way to take orders from almost every man in your county; a business better than a store with a \$20,000.00 stock. You will have no competition.

WE ARE THE LARGEST TAILORS IN AMERICA Of Fine Custom-Made Garments. We buy our cloth direct from the largest European and American Mills. We control the product of several Woolen Mills. We operate the most extensive and economic custom tailoring plant in existence, thus reducing the price of Suits and Overcoats made to order to \$35.00 and upward; Pants from \$15.00 to \$25.00. We show a large line of suits at from \$5.00 to \$8.00. Prices so low that nearly every one in your county will be glad to have their suits made to order.

We Furnish You a large, handsome leather bound book, containing large cloth samples of our entire line of Suits, Pants, overcoats, etc., a book which COSTS US SEVERAL DOLLARS; also Fine Colored Fashion Plates, Instruction book, Tape Measure, Business Cards, Stationery, Advertising Matter, and your name and address on rubber stamp with pad complete. We also furnish you a Salesman's Net Confidential Price List. The prices are left blank under each description so you can fill in your own selling prices, arranging your profit to suit yourself. As soon as you receive your sample book and general outfit and have read our book of instructions carefully, which teaches you how to take orders, and marked in your selling price, you are ready for business and can begin taking orders from every one. At your low prices, business men, farmers, and in fact every one will order their suits made. You can take several orders every day at \$1.00 to \$5.00 profit on every order. EVERY ONE WILL BE ASTONISHED AT YOUR LOW PRICES.

YOU REQUIRE NO MONEY. Just take the orders and send them to us, and we will make the garments within 5 days and send direct to your customers by express C. O. D., subject to examination and approval, at your selling price, and every week we will send you a check for all your profit. You need collect no money, deliver no goods, simply go on taking orders, adding a liberal profit and we deliver the goods, collect all the money and every week promptly send you in one round check your full profit for the week. NEARLY ALL OUR GOOD MEN GET A CHECK FROM US OF AT LEAST \$40.00 every week in the year.

THE OUTFIT IS FREE. We make no charge for the book and complete outfit, but as each outfit costs us by sending for the outfit with no intention of working, but merely out of idle curiosity. As a GUARANTEE OF GOOD FAITH on the part of EVERY APPLICANT, we require you to fill out the blank lines below, giving the names of two parties as reference, and further agreeing to pay, merely as a temporary deposit, ONE DOLLAR and express charges for the outfit, when received, if found as represented and really a sure way of making big wages. The \$1.00 you agree to pay when outfit is received does not begin to pay the cost to us, but insures us you mean business. WE WILL REFUND YOUR \$1.00 as soon as you send your orders have amounted to \$25.00, WHICH AMOUNT YOU CAN TAKE THE FIRST DAY YOU WORK.

Fill out the following lines carefully, sign your name, cut out and send to us, and the outfit will be sent you AT ONCE.

AMERICAN WOOLEN MILLS CO., West Side Enterprise Bldg., CHICAGO, ILL.

GENTLEMEN:—Please send me by express, C. O. D., subject to examination, your Sample Book and Complete Salesman's Outfit, as described above. I agree to examine it at the express office and if found exactly as represented and I feel I can make good big wages taking orders for you, I agree to pay the express agent, as a guarantee of good faith, and to show I mean business (merely as a temporary deposit) One Dollar and express charges, with the understanding the One Dollar is to be refunded to me as soon as my sales have amounted to \$25.00. If not found as represented and I am not perfectly satisfied I shall not take the outfit or pay one cent.

.....
Sign your name on above line.

.....
Name of Postoffice, County and State on above line.

Your age

Married or single.....

Address all orders plainly to
AMERICAN WOOLEN MILLS CO., Westside Enterprise Bldg., CHICAGO, ILL.

Derma-Royale is so pure, mild and harmless that one may drink a whole bottleful without bad effects.

WOMEN MADE BEAUTIFUL.

LOVELY COMPLEXIONS,

Pure, Soft, White Skin imparted by using
DERMA-ROYALE.



This unrivaled preparation is used by thousands. It absolutely and permanently removes blackheads, freckles, sun spots, redness and tan. Cures pimples, eczema, tetter, and produces a clear, transparent complexion, which adds charm and attraction to the plainest woman. Put up in elegant style. Price, \$1 per bottle. For sale everywhere.

ONE BOTTLE FREE

if you will talk it up and help introduce it. Send full post-office address today,
The Derma-Royale Co., Cincinnati, O.

A Weeder for \$5.00.

The New CHAMPION WEEDER



Is an attachment for any one-horse cultivator. Cultivates the row and between the row at one operation. The weeder cultivates the row, kills all the weeds and grass, leaving a mulch of fine earth about the plants, while the cultivator takes care of the middles.

Can Be Attached to Any Make of One-Horse Cultivator.

Instantly attached or raised or lowered at will. So low in price that every farmer can afford to have one. Sold strictly on its merits. **SATISFACTION GUARANTEED.**

Send us \$5 AND SECURE ONE AT ONCE. Remit by MONEY ORDER or REGISTERED LETTER. First order from your locality gets agency. **We Want Agents Everywhere.**

Address, **Champion Weeder Co., Friedens, Pennsylvania.**

RUPTURE Sure Cure at home; at a small cost. No operation, pain, danger or detention from work. No return of Rupture or further use for Trusses. A complete, radical cure to all (old or young). Easy to use; thousands cured; book free (sealed). DR. W. S. RICE, Box F, Adams, New York.

OPIUM PATENTS

and Liquor Habit cured in 10 to 20 days. No pay till cured. Dr. J. L. Stephens, Depl. L, Lebanon, Ohio.

FRANKLIN H. HUGH, Washington, D. C. No return's fee until patent is obtained. Write for Inventor's Guide.

\$70 EACH MONTH and expenses or commission to good agents for taking up signs and introducing our wonder working rings. Write for particulars. **ELECTROPATHIC CO.,** Buffalo, N. Y.

ONE YEAR FOR 10 CENTS

We send our monthly 16-page, 48-col. paper devoted to Stories, Home Decorations, Fashions, Household, Orchard, Garden, Floriculture, Poultry, etc., one year for 10 cents. If you send the names and addresses of six lady friends

WOMAN'S FARM JOURNAL, 1311 Evans Ave., Saint Louis, Mo.

AGENTS

TO SELL WASHING MACHINES AND OTHER NOVEL-ty. THE WASHINGTON NEWSPAPER CO., COLUMBIA, OHIO

FARMERS To Buyers of KNIFE MAY'S FREE! SEEDS.

A test of MAY'S Northern Grown Seeds will at once prove their superiority and we therefore make the following liberal offer to readers of this paper.

30 PACKETS FOR \$1.00

Cut out this Advertisement and send us One Dollar for the following magnificent collection of The Best Vegetable Seeds. (Retail price is over \$1.50) and we will send you the entire thirty packets and give the Cattle Knife FREE. All postpaid.



Beans, Golden Wax.
Beans, Early Mohawk.
Beet, Market Gardener.
Beet, Dwarves.
Cabbage, Early Summer.
Cabbage, Fottler's Brunswick.
Carrot, Best Long Orange.
Carrot, Oxheart.
Melon, Musk. Hackensaak.
Melon, Water. Phinney's.
Onion, Red Wethersfield.
Onion, White Queen.
Peas, May's Sunol.
Peas, First and Best.
Parsley.
Parsnip, Hollow Crown.
Corn, Crosby's Early.
Corn, Stowell's Evergreen.
Cucumber, Evergreen.
Cucumber, White Spine.
Lettuce, Early Simpson.
Lettuce, Buttercup.
Melon, Water, Cuban Queen.
Radish, Early Scarlet Turnip.
Radish, White Olive Shaped.
Radish, Wood's Early Frame.
Spinach, Curled Bloomsdale.
Squash, Sibley.
Tomato, Beauty.
Turnip, Purple Top.

KNIFE FREE.

This knife is just what every farmer should have. Extra weight, finely polished ends, three heavy steel blades including hoof blade. We give it FREE to every person ordering the above Dollar Collection through this advertisement, or we will send the knife to anyone ordering 14 packets (your choice) for 65 Cents.

READ THESE.

Buffalo Lake, Minn.—Seeds and knife received and am pleased with the collection. The knife is a dandy and worth twice the amount. M. L. NIELSON.

Cologne, Minn.—Seeds and knife have arrived and it is more than I expected for \$1.00. A good bargain. H. MATTFIELD.

Dassel, Minn.—Received seeds and knife sent for and I think the knife alone is worth what I paid for all. C. ANDERSON.

Crowley, La.—Was well pleased with seeds and knife just received. E. QUINN.

Seed Catalogue Free. Write for it.

MAY & CO., ST. PAUL, MINN.



\$1.95 BUYS A \$3.50 SUIT

3,000 CELEBRATED "KANTWEAROUT" double seat and double knee. Regular \$3.50 Boys' 2-Piece Knee-Pant Suits going at \$1.95.

A NEW SUIT FREE for any of these suits which don't give satisfactory wear. Send No Money. Cut this Ad. out and send to us, state age of boy and say whether large or small for age, and we will send you the suit by express, C.O.D., subject to examination. You can examine it at your express office and if found perfectly satisfactory and equal to suits sold in your town for \$3.50, pay your express agent our special offer price, \$1.95 and express charges.

THESE KNEE-PANT SUITS are for boys from 4 to 15 years of age, and are retailed everywhere at \$3.50. Made with double seat and knees, latest 1899 style as illustrated, made from a special wear-resisting, heavy-weight, ALL-WOOL, Oakwell cassimere, neat, handsome pattern, fine serge lining, Clayton patent interlining, padding, staying and reinforcing, silk and linen sewing, fine tailor-made throughout, a suit any boy or parent would be proud of. FOR FREE CLOTH SAMPLES of Boys' Clothing (suits, overcoats or ulsters), for boys 4 to 15 YEARS, write for Sample Book No. 906, contains fashion plates, tape measure and full instructions how to order.

Men's Suits and Overcoats made to order from \$5.00 up. Samples sent free on application. Address, SEARS, ROEBUCK & CO. (Inc.), Chicago, Ill.

Wilbur's Stock Food One Cent a Day

A 25-cent package contains enough goods to feed a horse or cow from 15 to 20 days; a 50-cent package, enough for 40 to 45 days, and a \$1.00 box, enough for from 100 to 110 days.

Rejuvenates and fattens stock that are thin and out of condition, hidebound, off their feed and need toning up. It keeps their stomach soft and sweet, hair soft and smooth.

Ask your dealer, or send 50-cents, for a sample package.

Wilbur Stock Food Co.

189 2d St., Milwaukee, Wis

LADIES

Write to-day for a FREE sample of ALLEN'S FOOT-EASE, a powder to shake into your shoes. It makes tight or new shoes feel easy. Cures Corns, Bunions, Chilblains, Aching, Swollen, Smarting, Burning, Callous, Sore and Sweating Feet. Dr. Stoddard says: "Cold or damp feet always predispose to an attack of Grippe." Allen's Foot-Ease keeps the feet dry and warm. Thirty thousand testimonials. All Drug and Shoe Stores sell it, or by mail, 25c. Address for sample, Allen S. Olmsted, LeRoy, N.Y. Lady Agents wanted everywhere.

BIG MONEY
for Agents



THE HANDY RIVETER
FOR MENDING HARNESS, BELTING,
etc. Indispensable to farmers, livery-
men and threshermen. HANDY
RIVETER complete, with 50 tubular
rivets, \$1.00. Best selling article
ever introduced. Agents write
for special prices and territory.

STANDARD SPECIALTY COMPANY, Salem, Ohio.

SELECTIONS

HOW PORTO RICANS SHAVE

THE natives of our new territory, Porto Rico, have no need to buy soap, for the wooded country abounds in plants whose leaves and bulbs supply most fully the place of that indispensable article. Among the best of these is the soap-tree, so called, though it is more a bush than a tree. Its bulb when rubbed on wet clothes makes a snow-white lather, which has an odor like old brown Windsor soap.

The Porto Ricans, who are all, from the highest to the lowest, great dandies in their way, make soap out of cocoanut-oil and home-made lye—and a fine soap it is, smooth and fragrant. This cocoanut-oil soap is used for shaving. When a man wishes to have a shave in the morning he starts out with his cocoanut-shell cup and his donkey-tail brush and bottle. It is never any trouble to find an empty bottle in Porto Rico, Cuba, Jamaica or almost any of the larger West India islands, even in remote spots in the mountains. At least twenty generations of thirsty people have lived there and thrown away the bottles.

The man carries no mirror; he is too poor to own such a luxury. Not one house in twenty in Porto Rico has even the very cheapest looking-glass. But generally rich nature provides the mirror, as well as the soap. The man goes to some convenient pool in the mountain stream where the water is quite still—there is his mirror. He breaks his bottle on a stone, and deftly picks out a sharp piece of suitable size. Then he lathers his face profusely, and begins to scrape away with his piece of glass, which in his hands works as well as the best steel razor. A cut, or even a slight scratch, is extremely rare as a result of this al fresco form of shaving.—Chicago Times-Herald.

FRIGHTENED BY MICROBES

A benevolent old man precipitated a small panic one recent frosty morning by a well-meaning admonition to a crowd of little darkies who were enjoying the warm air which is blown out by the fans which ventilate one of the large stores up-town. The gratings through which the warm air, drawn from all over the store, pours are inclosed by a high, iron railing, but this obstruction is as nothing to the shivering little street arabs, and every day a score or more of them toast their shins over the grating, while on the pavement beyond the passers-by are shivering and hurrying to keep warm. On this occasion the benevolent man was solicitous over the boys breathing vitiated and impure air, and, stopping in front of the railing, he sounded a note of warning as to the evils of so doing.

His remarks were unheeded until one little comedian asked what he meant by "microbes," which he said might be present in the exhaust. The explanation that they were little poisonous animals was perhaps best suited to the comprehension of the lads, but in an instant there arose a yell of fright from the dusky assemblage, and in a twinkling the air was full of flying legs and arms as the now ashen-faced darkies scrambled over the railing. The old man was too astonished to move, and was nearly swamped in the tumult, and at the last accounts the little fellows were still running.—Philadelphia Record.

THE RELATIVE INSIGNIFICANCE OF MAN

In a recent lecture at the Royal Institution Sir Robert Ball, lately astronomer royal in Ireland, stated that we now know the existence of 30,000,000 of stars, or suns, many of them much more magnificent than the one which gives light to our system. The majority of them are not visible to the eye or even recognizable by the telescope, but sensitized photographic plates have revealed their existence beyond all doubt or question, though most of them are almost inconceivably distant, thousands or tens of thousands of times as far off as our sun. A telegraphic message, for example, which would reach the sun in eight minutes would not reach some of these stars in 1,800 years.

An average of only ten planets to each sun indicates the existence within the narrow range to which human observation is still confined of at least 300,000,000 of separate worlds, many of them doubtless of gigantic size, and it is nearly inconceivable that those worlds can be wholly devoid of living and sentient beings upon them, probably mortal in our sense, as all matters must decay, certainly finite; and then what is the relative position of mankind?—London Spectator.

THE NEW WOMAN

THE SECRET OF STRENGTH AND BEAUTY

The athletic woman is everywhere in evidence. You can see her on the wheel, swinging a golf-club, rowing, riding, running, her every movement so graceful that you instinctively pause to look at her. The day of tight-laced, wasp-waisted women is over and gone. The age has given us a new woman who thinks more of her lungs than she does of her waist, and who is proud of her muscle. But have you noticed that these girl goddesses are almost without exception unmarried? As soon as a woman marries she begins to lose the swinging stride, the easy carriage, the steady hand, the quick eye. Her back hurts and she can't row, or swing a golf-club. She is nervous and the old sports and recreations are impossible to her. The reason for this condition is obvious. Few women are prepared for marriage either intellectually or physically. They have no



intelligent understanding of their own physiology, and no appreciation of the radical, physical changes which marriage inaugurates. The result is that debilitating drains are set up, and allowed to continue unchecked. The delicate female organs become ulcerated

and inflamed, and probably there is female weakness, or displacement of internal organs, with bearing-down pains. The consequence is nervousness, physical languor, weak back, headache, and a score of other ills. Even then it probably doesn't dawn on the afflicted woman's mind that the pain in her head, in her back or at her heart is in any way connected with the diseased conditions of the delicate womanly organs. Yet that is the exact condition of affairs. Thousands of women have proven this, who have used Dr. Pierce's Favorite Prescription to cure debilitating catarrhal drains, and an ulcerated and inflamed condition of the internal organs, and have found to their glad surprise that when the local health of the womanly organs was established, strength came back to the whole body.

REMOVE THE CAUSE

It's of no use to treat the head or the back or the heart. The center of the diseased condition lies in those delicate womanly organs, and through them the whole body becomes sympathetically affected. But one practical example is worth a volume of theory. Here is the actual experience of one woman.

"After a silence of a few months I again write you in regard to my health which has been very much improved by the use of Dr. Pierce's Golden Medical Discovery, 'Favorite Prescription' and 'Pleasant Pellets,'" writes Mrs. Mollie E. Carpenter, of Linaria, Cumberland Co., Tenn. "I have used thirty bottles of 'Favorite Prescription' and 'Golden Medical Discovery' and many vials of the Pellets." When I first wrote to Dr. Pierce concerning my health I was so weak I could only write a few words until I would have to rest. I was so weak I could hardly walk. Words cannot express my sufferings. Dimness of sight, palpitation, shortness of breath, black spots or else shining lights before my eyes, terrible headache, numbness in my arms and hands and tongue, also my jaws would get numb; constipation, falling of the womb, leucorrhea, soreness through my bowels; in fact I was diseased from head to foot. Now I can do my own washing and cooking. I can take a ten quart pail in one hand and a six quart pail in the other (full of water) and carry both one fourth of a mile and never stop to rest. I am as heavy as I was at nineteen years (125 lbs.). I also had dimness of sight and impaired memory. I had spells that when I would try to speak I couldn't think of the words I wanted to say, but would say something else. I have improved, oh, so much, and Dr. Pierce's medicines have done the good work. It has been about a year since I commenced the use of the medicines. My health has been improving slowly but surely. We cannot expect a disease that has been coming on for years to be cured in a few days."

"DISEASED FROM HEAD TO FOOT"

That experience is worth thinking over. Look at the gravity of the case. "I was diseased from head to foot."

Contrast the former weakness when she wrote her first letter to Dr. Pierce, and "could only write a few words until I would have to rest," with the present strength, which enables her to "take a ten quart pail in one hand and a six quart pail in the other, both full of water, and carry them a quarter of a mile without stopping to rest." That's

only the case of one woman in thousands who have been similarly cured by "Favorite Prescriptions." But it's an extraordinary case. It proves that the most helpless conditions yield to the persistent use of "Favorite Prescription." In ordinary cases the cure is much quicker, and a much smaller quantity of medicine is needed to effect it.

Many women let these diseases fasten on them because their modesty shrinks from the questionings, indelicate examinations and local treatments their friends have had to submit to. These offensive features are done away with in Dr. Pierce's method of treatment. Write a plain letter. You are not writing to a woman for sympathy but to a Doctor for help. And it's in the very law of our beings that man should feel

A HELPFUL SYMPATHY

for woman, such as is rarely extended by one woman to another. It's singular but it is true that women in general make light of the sufferings of other members of their own sex, and are apt to be critical and cynical over their pains. And perhaps for that reason women prefer to confide in a physician who like Dr. Pierce can give the practical sympathy of help. In a practice of over thirty years as chief consulting physician for the Invalids' Hotel and Surgical Institute at Buffalo, N. Y., Dr. Pierce has treated more than half a million women, and cured perfectly and permanently ninety-eight out of every hundred. This vast experience, which covered every form and variation of feminine disease, puts Dr. Pierce at the head of the specialists in the treatment of diseases of women.

Don't you want to get back that athletic girlhood again? Write to Doctor Pierce and take the first step to health. Remember there is no charge for this consultation by letter, and that every letter is held as strictly confidential. This offer will bear thorough investigation. Investigation is something that cannot be borne by those offers of free advice which come from people who have no medical knowledge, and are not qualified to practise. Such offers are deliberately misleading. There is no claim made to giving a physician's advice, they keep inside the law, yet the wording is designed to create the impression that if you write you will receive the advice of a physician. The most insidious of these offers of advice are artfully framed to appeal to woman's sympathy. Some man plays the part of

"THE BEARDED LADY"

and invites "women to write to a woman and get a woman's sympathy, etc." Even if these letters are genuinely answered by a woman and sympathy is expressed, this is not what invalid women want; they want medical advice. No woman can give this who is not a trained physician, and so far as known there is no qualified woman physician associated with any proprietary medicine. It is certain that there is no one connected with any institution who has, like Dr. Pierce, a record of success extending over thirty years, and covering the treatment of more than half a million women.

There is no alcohol, whisky, or other intoxicant in "Favorite Prescription," neither does it contain opium or any other narcotic drug. It does not create a craving for stimulants and narcotics. Of no other medicine especially designed for women can this be truthfully said. Here and there is found a dealer who seeks to make a little extra profit at a customer's expense by trying to sell one of these "just as good" substitutes when "Favorite Prescription" is called for. That's hardly fair for you. When you buy a "just as good" baking-powder, which of course pays the dealers a bigger profit, you get something for yourself, a spoon or a pitcher or something as a premium. But in this case the dealer gets all the extra profit and you get a bottle of medicine that you didn't ask for, and don't know anything about, except one thing which you may know for certain, that it won't cure as does "Favorite Prescription."

DICTIONARY OF HEALTH

You don't want to use a dictionary very often, but when you do want it, nothing will take its place. That fact is equally true of Dr. Pierce's dictionary of health—The People's Common Sense Medical Adviser. You may not want to consult it every day, but when you do, it is the one book for your need. In its 1008 pages can be found the answer to almost any question relating to human health and physical well being. This great book is given away. It will be sent free to any one on receipt of stamps to pay the cost of mailing only. Send twenty-one one-cent stamps for the edition in paper or thirty-one stamps for the same book in cloth. Address, Dr. R. V. Pierce, Buffalo, N. Y.

X-RAY PRINTING

The patent recently taken out for printing by the X-ray has not received much commendation from its critics. The inventor, G. Isambard, a Frenchman, proposes to use photographic paper to receive the impressions produced by his system, and does his work by means of X-rays. The design or reading matter to be printed is traced on the plate in ink, which is impervious to the X-rays. The plate is then set up in front of a sheet of sensitized paper, and the current is turned on in the Crooke's tube. Where the screen has not been protected by ink the rays go through and make an impression on the sensitive paper, turning it dark; but where the ink shuts them off the paper remains white. Thus the copy obtained shows the writing and pictures in white on a dark ground. The printing-paper is to be arranged in packages, several layers deep, so that a great deal of material which is to receive the printed record can be arranged completely around the tube, the rays from which proceed in all directions. Unfortunately, the Isambard pictures are blurred around the edges, and sensitized paper is comparatively expensive, and a great deal of it would be required to do even little printing. The slowness of the operation is another drawback. There are newspaper-presses that turn out fifty thousand copies an hour; the X-ray process would require more than a month to give that number of impressions.

STATE OFFICERS PAID IN PELTS IN 1788

Probably few people to-day know that the original name of the state of Tennessee was Franklin, or that in 1788 the salaries of the officers of this commonwealth were paid in pelts, but the following is a correct copy of the law:

"Be it enacted by the General Assembly of the State of Franklin, and it is hereby enacted by authority of the same, That from and after the first day of January, 1788, the salaries of this commonwealth be as follows, to-wit:

"His Excellency, the Governor, per annum, one hundred deerskins.

"His Honor, the Chief Justice, five hundred deerskins.

"The Secretary to his Excellency, the Governor, five hundred racoonskins.

"County Clerk, three hundred beaver-skins.

"Clerk of the House of Commons, two hundred racoonskins.

"Members of the Assembly, per diem, three racoonskins.

"Justice's fee for serving a warrant, one minkskin."—Independent Banner.

ORIGIN OF THE PEACH

The Japanese lay claim to having first discovered and utilized the peach. Here is a quaint Japanese legend concerning the origin of the peach:

"A pious old couple, stricken with years and poverty, subsisted by begging. One day, on the highway, the woman found the beautiful ripe fruit. She did not selfishly eat the luscious peach alone, although most famished, but took it home to divide with her husband. As the knife cut into it the fruit opened, and an infant sprang forth, who told the beggars that he was the god Shin-To, and had accidentally fallen from the Japanese heaven while at play with some other gods and goddesses. For extricating him from the peach Shin-To gave the Japs its seed to plant, and told them its product would make them wealthy."

As you bite into the luscious fruit the memory of this pretty legend will not lessen its enjoyment.

A FARMER'S PROBLEM

Mr. F. M. Shields, of Coopwood, Miss., sends the "Journal" this problem:

A farmer had 2,080 pounds of grain at the depot, and gave a wagoner seventy-five cents a hundred to haul it, paying him in the same grain at the following prices; namely, three tenths of the hauling bill was paid in corn at fifty-eight cents a bushel of fifty-six pounds, three fifths was wheat at \$1.55 a bushel of sixty pounds, and the remainder of the bill was paid in oats at thirty-six cents a bushel of thirty-two pounds.

Agreed that the wagoner does not charge for the hauling of his own grain.

The load being delivered, how many bushels of each kind of grain does the wagoner get, and how many bushels of each kind did the farmer have left after paying the wagoner?

This will interest those of our readers who are fond of mathematical exercises. Mr. Shields writes that a good many first-grade teachers in Mississippi were unable to solve the problem.

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THE BLIND MUSICIAN

BY EDGAR W. CURTIS

ONE does not ordinarily expect to find anything particularly striking in the life of the farmer. But few think that on the farm may often be found examples of the greatest perseverance and of victory over what would seem almost insurmountable. If you will come with me to Cherry Creek, a small village in New York, I will show you a man who has lived more than twenty years on a farm under circumstances almost incredible.

Chautauqua county occupies the southwestern corner of the state. Near the eastern part of the county is the little village of Cherry Creek, famous throughout the country as the home of Prof. Darlin T. Bentley, musician, farmer and hero. A short distance to the southwest is the village of Ellington, and toward the southern part of the county is the city of Jamestown, two places intimately connected with the life of this man.

Many a farmer has given up because of a poor season or ill health of himself or family, and felt that no one could have succeeded under the misfortunes he had suffered; but here is one who has accomplished so much under such unusual conditions that people who, when first acquainted with the facts, thought them impossible, even yet wonder at what he is still doing both on the farm and off.

On the fourteenth day of October, 1864, a big Republican mass-meeting was held in Jamestown, in the interest of Reuben E. Fenton, candidate for governor, and also to help along the campaign of "Honest Abe," who had then received his second nomination for president. Three boys, Elliott Sherman, Darlin T. Bentley and Abe Stafford, were firing the cannon, which was an old cast-iron six-pounder; while two loaded the other held his thumb over the vent-hole, to keep out the air and prevent an explosion in case any fire was left after the cannon had been swabbed out. At first Bentley was "thumbing," but Sherman said to him, "Darley, your thumb is so small I am afraid you can't cover the hole, and as my hands are larger I believe you had better let me do that, as it will be safer for all of us." Accordingly this change was made. The old gun had been fired four times, and the bag of powder for the fifth charge had been put in and was being rammed down. It will never be known whether Sherman, without realizing it, lifted his thumb slightly from the hole or whether the jar from the ramrod lifted his thumb; anyway, there was a premature discharge. Of the two loading Stafford was the more fortunate, as he was killed instantly and saved from the agony and torture the other suffered for years.

Bentley at the time stood with his left hand on top of the cannon, and his right holding the ramrod, so he received the full force of the charge in the right side. This side of his body was horribly burned and lacerated from his hips up. On the breast the flesh was torn up so his ribs were wholly uncovered in many places. The right collar-bone was broken and a piece of the flesh blown out, so that for many years a lemon could be placed in the depression. This has partially filled up. Both eyes were torn out, and parts of the right side of the face and part of the right temple-bone blown off. The whole upper part of his body was filled with pieces of wadding, grains of partially burned powder and splinters of the cherry ramrod. The right hand was blown off, and the arm was so badly mangled and burned that it had to be amputated about five or six inches below the shoulder. For a long time the pain was almost unbearable and the stump would not heal. One day when he was putting on his shirt the sleeve caught on the side of the stub and would not go on. Feeling with his left hand, he pulled out a ragged splinter of the ramrod about two inches long. This had been in his flesh two years, and as soon as it was removed the stump healed.

He never broaches the subject of his misfortune, and even tries to avoid it when his friends speak of it. The writer has been intimately acquainted with him for the past fifteen years, but did not know any of these details until a few weeks ago, and then the account of it could be got from him only after repeated questions in regard to many points over which he was inclined to pass with hardly a mention. At last he did say, "No one can ever realize the agony I suffered from those wounds and burns; and hundreds of times I have wished I could have been as fortunate as Abe Stafford, who never realized what had happened."

The next April the old cannon was brought out to aid in the celebration of Lee's surrender. A man who had been through the war unhurt was helping to fire it when it went off while being loaded, blowing off some of his fingers and putting out one eye. Then the people thought the "old devil," as it was called, had mangled too many persons, so they took sledges and broke it up. Darley now has small pieces from the inner side, and the arch shows that the bore was about five inches. When they had smashed it they found that the breech had become "honeycombed" by the action of the powder during all the years it had been used. Pieces of the bag which were afire would get into these cells or holes, and when it was being swabbed out the water could not reach the fire, and premature discharges were the result.

a left-handed cornet had been made to order and presented to Bentley. This was the first thing suggested to him which it seemed he could do in his condition. Mr. Clapp gave him some instruction, and to-day Prof. D. T. Bentley is one of the finest cornet-players in western New York. Soon after he went to Batavia his people moved to a farm near Cherry Creek, where he and his mother now live.

He was at Batavia seven years, and so thoroughly did he master the point-print system for the blind that he became assistant instructor in that subject, and his name appeared as such in the annual catalogue of the institution. During the whole time he studied music, and also became instructor in that.

The janitor there cleaned the brass-work of the engine with water-line, and being attached to Darley, he took it upon himself to keep his cornet cleaned up bright. Unfortunately, the cornet had not the strong constitution of the brass-work of the engine and in a short time the lime had eaten the metal so that the cornet was ruined. But the faculty, recognizing the genius of the blind musician, had another much more expensive cornet made for him, and that is the instrument he now uses.

When he had finished the seven years' course at Batavia he began to give music-lessons, and ever since that has been his profession. In this he has accomplished

has been told; and as for a discord, one cannot be so slight as to escape him. In his teaching he has had phenomenal success, making good players of many whose parents had been told by other music-teachers that their children could never know anything of music, and that any time or money spent in that direction was wasted.

At times his pupils have been scattered over a region twenty-five miles in diameter, and he drives to the home of each. When taking a new driver absolutely unacquainted with the route he never has a third person to direct the driver on the first trip, but he does that himself. He knows where he is at all times, and tells his driver where to go and at what places to stop when he gets to them.

For many years he helped his father and mother work their farm of forty acres. A few years ago his father died, and since that time he and his mother have done most of the work, except the general planting and harvesting of the larger crops. The barn is about twenty rods from the house, and a crooked path leads to it down hill through an orchard; but he can walk from one building to the other as accurately and quickly as any one with two of the best eyes ever put into a head. During the summer they keep their cows across the railroad track, about an eighth of a mile from the house, and he does the milking. With one hand he can milk a cow as quickly as many can with two.

The day I called to get his photograph he was picking apples, and when I came up and had talked a few minutes, he held out a large sweet winter apple, and said, "Ain't that a beauty, Ed? Have you any apples like that? Just look at it, not a blemish on it anywhere, and nearly all of them are as nice as that." Not one person in a hundred who did not know him and could not see his face to know that he had no eyes would ever imagine from his conversation that he is blind. He talks about how things look just as any one does.

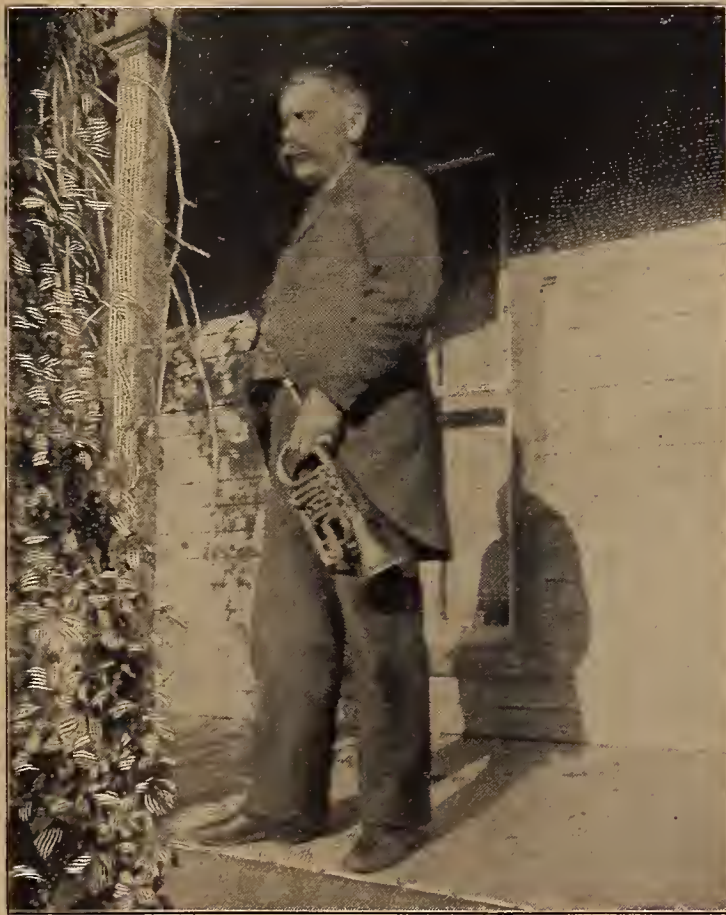
He knows who are the good farmers through all the country where he drives, can tell where there is a good piece of corn or who has the best field of oats. The farmer who can see every thing as he drives along the road is often surprised that he has never seen things that Bentley will call to his notice. The house well painted, with well-kept lawn and shrubbery, is always noticed by him, and so is the place with every thing tumble-down.

Many people wonder how he knows of these things. First of all, he remembers what is said in his presence by people in their conversation with him and others, and he inquires about things they have failed to mention. Not one person in fifty is as good a conversationalist, and there is probably not another man in the locality so well informed.

His mental acuteness in a mathematical way was cleverly shown when he went into an office on the second floor. He was not acquainted with the stairs, and as he stepped into the room he said, "My! those stairs are long ones. The room below must be twelve or thirteen feet high." He had not counted the stair-steps, but he estimated correctly the height of the room.

For a period of time usually reckoned as a generation this man has not seen a ray of light, and never can as long as he lives. The farm was bought

when farm property was high, and of late each year finds the value of farms in this locality less than the year before. Now, at the age when most men feel that they must begin to rest from their labors, this man, with one arm and without sight, with his mother an old lady, and a mortgage of about one thousand dollars on a forty-acre farm, is still struggling, as he has since he was torn to pieces by the cannon, to make a living for himself and mother from his music-lessons and the farm. His most intimate friends hear no complaints from him, and he is always cheerful.



PROFESSOR DARLIN T. BENTLEY

At the time of the disaster he lived in Jamestown, learning the trade of harness-maker, but his people lived in Ellington. They soon sold their place to get means to send him to Batavia, which institution for the blind had just then opened.

Before he went to Batavia, William Clapp, a cornet-player still living at Ellington, told him that he could learn to play a cornet even though he had only one hand, as he himself often played hours at a time and used only one hand. Mr. Clapp soon had the people of Ellington interested, and in a short time

things which seem almost impossible. Besides being a cornet artist, he is an accomplished pianist, so far as that is possible for one with only the left hand. He gives lessons on the piano, organ, cornet, violin, guitar, clarionette and banjo. Many people naturally wonder how a person absolutely blind and with but one arm can give lessons on the violin. To begin with, he understands perfectly the finger-board of the violin, knows how the violin should be held, the position of the body and how one should bow. He feels to know that his pupil is doing as he

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It is the monthly summary of "Commerce and Finance of the United States" recently issued by the Treasury Department is a concise but comprehensive account of all the "Colonial Systems of the World," from which the following extracts are taken:

"The colonies, protectorates and dependencies of the world number 125. They occupy two fifths of the land surface of the globe, and their population is one third of the entire people of the earth. Of the 500,000,000 people thus governed over three fourths live between the tropics of Cancer and Capricorn or within what is known as the torrid zone, and all of the governing countries lie in the north temperate zone. Throughout the globe-encircling area known as the torrid zone no important republic or independent form of government exists save upon the continent of America.

"The total imports of the colonies and protectorates average more than \$1,500,000,000 worth of goods annually, and of this vast sum more than forty per cent is purchased from the mother-countries. Of their exports, which considerably exceed their imports, forty per cent goes to the mother-countries. Large sums are annually expended in the construction of roads, canals, railways, telegraphs, postal service, schools, etc., but in most cases the present annual expenditures are derived from local revenues or are represented by local obligations. The revenues of the British colonies in 1897 were £151,000,000, and their expenditures £149,000,000. While the public debt in the more important and active of these communities aggregates a large sum, it is represented by canals, railways, public highways, harbors, irrigation, and other public improvements intended to stimulate commerce and production, the railways in operation in the British colonies alone aggregating 55,000 miles.

"The most acceptable, and therefore most successful of the colonial systems are those in which the largest liberty of self-government is given to the people. The British colonial system, which has by far outgrown that of any other nation, gives wherever practicable a large degree of self-government to the colonies: the governors are in all cases appointed by the crown, but the law making and enforcing power being left to legislative

bodies which are elected by the people where practicable, in minor cases a portion being elected and a portion appointed, and in still others the appointments divided between the British government and local municipal or trade organizations, the veto power being in all cases, however, retained by the home government. The enforcement of the laws is intrusted to courts and subordinate organizations, whose members are in many cases residents or natives of the communities under their jurisdiction. In the French colonies less attention is given to law-making and administration by local legislative bodies, the more important of the colonies being given members in the legislative bodies of the home government. In the Netherland colonies, and in the less advanced communities under British control, the laws and regulations are administered in conjunction with native functionaries.

"Of the 125 colonies, protectorates, dependencies and 'spheres of influence' which make up the total list, two fifths belong to Great Britain, their area being one half of the grand total, and their population considerably more than one half of the grand total. France is next in order in number, area and population of colonies, etc., though the area controlled by France is but about one third that belonging to Great Britain, and the population of her colonies less than one sixth of those of great Britain."

Of the different forms of colonial governments, that of Holland in the East Indies is a striking example. The Dutch East Indies is a "group of islands in Oceania, including Java, most of Sumatra, the Celebes, the Molucca archipelago, Riau-Liugga archipelago, and others, having an area of 736,400 square miles, and a population of 34,000,000, of which number 70,000 are Europeans and persons assimilated with them. The government is represented by a governor-general, who represents not only the executive power of the government, but has the authority to pass laws and regulations for the administration of the colony, subject to regulations and control of the Netherlands government. In this he is required to adhere to the constitutional principles on which the Dutch Indies are governed, and which are laid down in the 'Regulations for the Government of Netherlands India,' established in 1854. The governor is assisted by a council of five members, partly of a legislative, partly of an advisory character. The islands are divided into provinces or residences, which are governed by a resident, assisted by several assistant residents, and a number of subordinate officials called 'controleurs,' who are appointed by the government after a rigid examination. The resident and his assistants are aided in their intercourse with and control over the natives by co-operation with the native chiefs, who receive salaries or percentages on the amount of taxes gathered from the natives.

"Justice is administered under a system which places Europeans and persons assimilated with them under laws nearly similar to those of the mother-country, while the natives are subject to their own customs and institutions. The administration of justice for Europeans is intrusted to European judges; that for natives is to a great extent under their own chiefs. The revenues are from customs duties, personal imposts, licenses, land taxes, taxes on houses and estates, the government monopolies on salt, opium, railways, and the sale of coffee grown under the culture system on lands owned by the government, some of which are under perpetual lease to those occupying them. The colonial army consists of 38,600 soldiers and 1,500 officers, over one third this number being Europeans, the remainder natives. Nearly four fifths of the exports of sugar, coffee, tea, indigo, cinchona, tobacco and tin go to the Netherlands, and a large share of the imports are from the home government."

COLONEL SIR G. S. CLARKE, in an article in the "North American Review" for February on imperial responsibilities a national gain, says:

"Henceforth the United States will occupy a new position among the nations of the world. They have, in effect, accepted responsibility for the righteous government of some ten millions of alien races. Their task, in the Philippines especially, will be difficult: but if it is approached with high aims, and without seeking direct advantage, the difficulties will be successfully surmounted. The secret of the government of Eastern peoples mainly consists in the art

of selecting agents of the right stamp, and the United States possesses men in abundance who are capable of regenerating the lost colonies of Spain. It is only necessary to make the selection without fear or favor, and with a single eye to the general good. The marvelous prosperity of the protected states of the Malay peninsula, inaugurated by Sir Andrew Clarke and carried out by a few British representatives, acting through native rulers and respecting native prejudices, shows what can be accomplished in conditions closely resembling that of the Philippines. What we have done, Americans imbued with the same love of liberty and reverence for justice can undertake without doubts or misgivings, and the incalculable moral gain which imperial responsibilities have conferred upon us will be their reward. Reflex action upon the United States will be one of the most important results of the new departure.

"A great nation once committed to expansion can neither draw back nor set a limit to its inherent energies. For the moment the future of Cuba, Porto Rico, the Philippines and the Sandwich islands is the subject of speculation; but President McKinley touches upon two other questions, which will shortly assume great importance. 'The construction of the Nicaragua canal,' he states, 'is now more than ever indispensable, and our policy more imperatively than ever calls for its control by this government.' The interests of the world, no less than those of the United States, demand that this linking of the oceans shall be realized. Those interests also require that the waterway should be absolutely controlled by the United States. We do not want to repeat in the western hemisphere the political complications in which the Suez canal is involved. But the policy indicated by the President will infallibly entail new relations and new responsibilities in regard to the Central American republics. Again, in becoming an Asiatic power the United States will stand face to face with the great problem of China. 'If no discriminating treatment of American citizens and their trade be found to exist, or be hereafter developed,' states the President, 'the desire of this government would appear to be realized.' This is precisely the British view, and at last the English-speaking peoples stand side by side in upholding a principle of the highest international importance.

"With the new year a fresh chapter in the history of the United States opens. The fair white pages await the impress of statesmanship, and I firmly believe that they are destined to bear the record of honorable work in the cause of liberty, justice and humanity."

In a recent speech before the Boston Home Market Club President McKinley spoke as follows on the Philippine question: "The future of the Philippines is now in the hands of the American people. Until the treaty was ratified or rejected the executive department of this government could only preserve the peace and protect life and property. That treaty now commits the free and enfranchised Filipinos to the guiding hand and liberalizing influences, the generous sympathies, the uplifting education, not of their American masters, but of their American emancipators. No one can tell to-day what is best for them or for us. I know no one at this hour who is wise enough or sufficiently informed to determine what form of government will best subserve their interests and our interests, their and our well-being.

"The whole subject is in the hands of Congress, and Congress is the voice of the conscience and judgment of the American people. Upon their judgment and conscience can we not rely? I believe in them; I trust them. I know of no better or safer human tribunal than the people. Until Congress shall direct otherwise, it shall be the duty of the executive to possess and hold the Philippines, giving the people thereof peace and order and a beneficent government, affording them every opportunity to prosecute their lawful pursuits, encouraging them in thrift and industry, making them feel and know that we are their friends, and not their enemies; that their good is our aim; that their welfare is our welfare, but that neither their aspirations nor ours can be realized until our authority is acknowledged and unquestioned. That the inhabitants of the Philippines will be benefited by a republic is my unshaken belief: that they will have a kinder government under our guidance, and that they will be aided in every possible way to be a self-respecting and self-governing people, is as true as that

the American people love liberty and have an abiding faith in their own government and their own institutions.

"No imperial designs lurk in the American mind. They are alien to American sentiment, thought and purpose. Our priceless principles undergo no change under the tropical sun. They go with the fiat:

"Why read ye not the changeless truth
The free can conquer but to save.

"If we can benefit these remote people, who will object? If, in the years of the future, they are established in government under law and liberty, who will regret our peril and sacrifice? Who will not rejoice in our heroism and humanity? Always perils, and always after them safety; always darkness and clouds, but always shining through them the light and the sunshine; always cost and sacrifice, but always after them the fruition of liberty, education and civilization. I have no light or knowledge not common to my countrymen. I do not prophesy. The present is all-absorbing to me, but I cannot bound my vision by the blood-stained trenches around Manila, where every red drop, whether from the veins of an American soldier or a misguided Filipino, brings anguish to my heart; but by the broad range of future years, when that group of islands, under the impulse of the year just passed, shall have become the gems and glories of those tropical seas—a land of plenty and of increasing possibilities, a people redeemed from savage indolence and habits, devoted to peace, in touch with the commerce and trade of all nations, enjoying the blessings of freedom, of civil and religious liberty, of education and of homes, and whose children and children's children shall, for ages hence, bless the American republic because it emancipated and redeemed their fatherland and set them in the pathway of the world's best civilization."

OUR Washington correspondent writes as follows on a matter that has been the subject of much misinformation: "A number of statesmen and some newspapers have been holding forth to the effect that with the acceptance of the Spanish treaty the Philippines become a part of the United States, and the Filipinos citizens of the United States; that therefore trade between the United States and these islands will be free, and that the tobacco, sugar, fruit and vegetable industries of this country will have to compete directly with such products from the Philippines; also that the labor interests of the United States will be jeopardized by the influx of thousands of cheap laborers who will have thus acquired the rights of American citizenship. This is an absolutely false and absurd position, and the farmers of the United States should not be misled into swallowing such statements. 'As a matter of fact,' said a prominent official, whose high position is a voucher for the accuracy and honesty of his statement, 'the administration is watching out for the interests of the American farmer and for the interests of the American laborer.'

"The anti-expansionists seem to have taken it for granted that free trade relations will be the result and effect of the ratification of the treaty, and that this country will be subject to a flood of Philippine products and natives. Nothing of this kind will happen. The secretary of the treasury is preparing a tariff for the Philippine islands, so that goods going there from this or any other country will contribute their share toward paying the expenses of the islands, and on the other hand, Philippine goods coming into the United States will pay tariff duties at the ports of entry.

"The solution of the question as to what the status of the Filipinos is to be in the future with respect to citizenship, and as to what tariff regulations will be made concerning exports and imports between this country and the islands, is a matter for Congress to deal with, and Congress alone. Nobody else can do anything in the matter. Congress is supposed to do what the people want; if it does not, then the people know what to do. As this whole matter rests exclusively with Congress, and Congress directly represents the people, it would seem that the subject is in safe hands. Really a great deal of unnecessary alarm has been raised by a few persons who drew dismal pictures of the destruction of American industries, and of vast hordes of pauper savages flocking into competition with American labor."



ABOUT RURAL AFFAIRS

Fruit-growers in Council The fruit-producing industry of western New York is a vast concern, and the fruit-producers themselves are an intelligent and wide-awake class of men, of which facts the meetings held in January of each year in Rochester, N. Y., always give abundant evidence. If any one wants to hear lively discussions of fruit matters and kindred subjects let him attend these meetings. It must be a dull person indeed who could not draw some valuable lessons from what he sees and hears during the discussions of the Western New York Horticultural Society at their annual meetings. Of course, this organization has the advantage of the efficient help of at least two of the best agricultural experiment stations in America, if not in the world, of the department in Washington, and of expert fruit growers and investigators from many states. In fact, we frequently meet at these gatherings numbers of professors from Cornell University, from the state experiment station at Geneva, besides occasional visitors from many of the stations in near-by states and from Canada, also prominent nursery-men from all over the country. Unfortunately, during the last meeting President W. C. Barry had to be absent, being in bed sick with la grippe; but vice-President S. D. Willard, of Geneva, filled his place with credit to himself and to the society.

Prevention of Fruit-rot Dr. Caldwell, the chemical expert from Cornell, talked about causes and prevention of fruit-rot. This disease has given me much trouble for some years. Two years ago it took almost every cherry on my trees, and left me few sound plums and peaches. For several seasons I have tried persistent spraying with rather strong Bordeaux mixture, but apparently with little benefit, so that, at least for this disease, I have nearly lost faith in spraying. Dr. Caldwell's remarks did not serve to revive such faith, either, although reports were offered from other quarters telling of good results from spraying with Bordeaux mixture. Removal and destruction, by fire or boiling, of the rotted fruit, of dead twigs, etc., is recommended, and I believe we have to look for a remedy or prevention in this direction rather than in spraying. Flies and wasps seem to carry the spores of the disease easily from affected to sound fruit.

Potash and Soda Perhaps the reader remembers the discussions which some time ago took place in the agricultural papers about Andrew S. Ward's contention that soda can take the place of potash in plant nutrition. Station Director Dr. Jordan touched on this point in his talk by stating that in experiments conducted at Geneva, tomato-plants refused to be cheated by the substitution of soda for potash; in other words, that without potash they failed to do anything in the way of thrifty growth. Barley-plants, however, were more easily imposed upon, at least for a few weeks, and made good growth on soda without potash. The lesson which Dr. Jordan wished to impart was that there seems to be a sympathetic mixture of foods for different plants, and that different plants have different requirements and food preferences. A study of the mechanical conditions, moisture conditions and food conditions is the direction in which the investigation should work in the future. We have good plant material in hand already. No use looking for a new panacea in new material, new varieties, etc. We have not yet learned to make the most of what materials we already possess.

Food Requirements This same idea also found prominence in the strawberry talk of Mr. Collingwood, the accomplished editor of the "Rural New-Yorker." He said: "We do not feed oats to the pig, table-scraps to the cow, or cotton-seed meal to the horse. Each animal has its particular foods and likings, and we divide the feed on the farm accordingly—oats to the horse, cotton-seed meal to the cow, table-scraps to the fowls, etc. In feeding plants we must adopt the same principle. Farm manure may prove more profitable for corn than for potatoes or strawberries. There is

a difference in the digestive machinery of different plants. The strawberry-plant does not reach out very far, and the well-prepared food must be brought close to it. It does all its feeding inside of the space of a peck measure, while a Gregg raspberry-plant feeds in thirty to thirty-five cubic feet of soil. The strawberry-plant is like a cow tied to the manger—it yields in proportion to the food that is put in the manger. The raspberry-plant is like a cow in pasture—if the pasture is good enough, the cow or plant can hunt its own food, and do just as well."

My friend, Mr. Collingwood, sometimes seems to forget that there is not only a difference in the particular food requirements of particular plants, but also a great difference in soils. At present I am a great user of and believer in stable manures, and have bought car-load after car-load from the stock-yards, using chemical manures to a very limited extent and for special purposes only. When I lived in New Jersey, and had to work New Jersey sandy loam, I did as the Jersey-men do, and as Mr. Collingwood stated he does; namely, I relied mostly on chemical fertilizers. While I had not stable manure enough for my needs I refused to buy it because I found it too expensive. Mr. Collingwood uses the southern cow-pea as a humus crop, and says it is God's best manual gift to man. To produce a big growth of pea-vines he makes a mixture of

500 pounds of muriate of potash,
1,000 pounds of dissolved phosphate rock,
500 pounds of fine bone,
2,000 pounds,

of which he uses a few hundred pounds to the acre. The cow-peas are drilled in and cultivated, as he finds that cultivation keeps out the white grub.

Plowing Cow-peas Under The cow-peas are plowed under for manure. All who have ever tried plowing a heavy growth of vines, clover or weeds into the ground, and do it nicely, know that it is not an easy task. Mr. Collingwood solves it by chopping the vines up with a cutaway harrow before plowing. After that the field is harrowed and reharrowed until the surface is thoroughly pulverized. The patch is then ready for setting the strawberry-plants. I have to say, however, the cow-pea is not a reliable manure crop for our colder soils and localities. Red clover remains our mainstay, although in some portions of New York state crimson clover is used with good effect as a clover and manure crop.

Growing Strawberries Mr. Collingwood's way of growing the large berries which he can brag about is as follows: The ground, prepared as already mentioned, is marked off in ridges, with some of the fertilizer mixture applied in strips a foot wide. After the ridges are smoothed down, good plants are set right on these strips, eighteen inches apart. Only one runner is allowed to root between each two plants, making the plants nine inches apart. All other runners are removed as fast as they form. This method gives large and fine berries. After fruiting, a light furrow is plowed away from the row on each side and some fertilizer scattered in it. You can plow pretty close to the strawberry-plant without injuring its roots. To grow good plants, Mr. Collingwood puts them in a bed by themselves, and uses plenty of nitrate.

Tillage and Productivity Prof. Roberts, of Cornell, told again of the vast amounts of plant-food contained in our soils. The average of sixteen analyses of farm soils showed from 4,000 to 4,500 pounds of potential nitrogen, an equal amount of phosphoric acid, and over 40,000 pounds of potash in the upper eight inches of an acre of land. Sometimes there is still a larger amount of plant-foods in the next eight inches. Why is it necessary to spend money for manures, especially for potash in the form of imported chemicals, when there is such an abundance already in the soil waiting to be freed by tillage? In some cases the potash might be made available by the application of a little gypsum, say one

bushel to the acre. Prof. Roberts is extremely enthusiastic over the possibilities of our soils as they are, and to the effects of tillage; I believe sometimes a little too much so. Tillage alone does not seem to me a panacea for all ills on all soils. There are thousands of acres of land in this state that have not more than a small fraction of the plant-foods which Prof. Roberts finds in the soils near Ithaca.

Horse Manure and Shavings I have recently been asked repeatedly about the value of horse manure coming from stables in which sawdust is used as bedding. It is true that sawdust is an excellent absorbent of liquids, and it may save more of the most valuable portion of the manure than does straw, especially if there are holes in the stable floor for giving the liquid manure a chance to escape. Prof. Roberts says that the admixture of fine shavings does not injure the manure except in some instances by drying out the soil. But straw has in itself more plant-food than are contained in shavings, and manure containing straw bedding therefore is worth more, ton for ton, than the mixture of bark, manure and shavings.

SALIENT FARM NOTES

The Cow-pea Next to clover the cow-pea is the best fertilizing plant I know of, though the soja-bean is almost its equal. Like clover these plants have the power to take nitrogen from the air and add it to the soil. Just how this is accomplished is rather difficult to explain, but the fact remains that it is done. Furthermore, these plants exert a mechanical effect on the soil peculiar to themselves. During the hot, dry weather we usually have in August and September I have walked over oats and wheat stubble and in fields of corn and found the soil as hard almost as rock. Stepping then into a field from which a crop of cow-peas had been cut for hay I found the dry soil as loose and mellow as though it had been thoroughly disked every week all through the summer.

On the peculiar whitish soil of southern Illinois I have seen many fields of corn growing on land which the previous year had grown a crop of oats, wheat or cow-peas, and in every instance that growing on the cow-pea land was far thriftier and stronger than the other, while the yield to the acre often was greater by fifteen to thirty bushels. Many careful farmers told me that the fertilizing and mechanical effects of a crop of cow-peas was quite equal to a heavy dressing of good barn-yard manure.

One of the leading and most successful orchardists in the famed "apple belt" of southern Illinois grows cow-peas and corn alternately in his extensive orchards until they come into bearing, and they not only pay the entire cost of planting, cultivating, spraying and care of the trees, but also leave him a very fair profit besides. Each year one half of his young orchards are planted to cow-peas, and the other half to corn, and this system of rotation with cow-peas and corn insures him good crops every year—an abundance of feed for his horses and cattle that is quite equal to the very best clover hay, and corn enough to feed and finish a fine herd of hogs.

He tells me that his horses and cows much prefer the cow-pea hay to good timothy, that they will not touch the latter until they have eaten every particle of the pea hay. This is the testimony of all who have used it for stock feed.

This farmer and orchardist sows the peas with a common wheat-drill having each alternate seed-outlet closed. The horses attached to the drill step along briskly, and the seed is dropped exactly as he wants it—three to six inches apart. The sowing is done in freshly plowed, well-pulverized soil between the twentieth of May and fifth of June, and he has never failed to get a fine stand and a full crop. He, as well as most other skilled farmers in that section, prefer the variety called Black Eye. A few growers like the Whip-poor-will variety because it makes rather more vine than the others, but it is best adapted to land that is poor, sandy or thin and in need of humus and fertilizer.

A neighbor of the orchardist mentioned planted six acres of rather thin land to cow-peas with a corn-planter, using the smallest holes in the seed-plates and setting the drill-gear to drop the peas ten to twelve inches apart. In going to the further end of the

field he ran the inner wheel two feet from the last row, and straddled the outer row in returning, thus planting the rows about two feet apart. When the plants attained a height of three to five inches he cultivated them with a narrow cultivator drawn by one horse. One cultivation proved sufficient and they soon so shaded the ground that no weeds could grow. Early in September he weighed a bunch of shotes and turned them into the field. When they had got about all of the peas he weighed them again and found that the peas had made him fifty-four dollars' worth of pork. The following spring the field was plowed and planted to corn, and the yield was fifty-two bushels to the acre.

The next year he planted eight acres to cow-peas, and they grew nicely, but a succession of heavy showers in July and August caused them to run so much to vine that scarcely any seed formed. Part of them were cut for hay and part left on the ground. The plat was plowed the following spring and planted to corn, which yielded nearly sixty bushels to the acre. No difference could be noted between the portion from which the vines were cut for hay and that on which they were left, indicating plainly that the roots of the plant contain the fertility, and that unless the soil is in need of humus it is not essential that the vines be turned under.

Cow-peas may well be termed the poor man's manure. They are grown in one season, can be made into hay that is equal or superior to the best clover, while the roots supply the soil with the fertility necessary to produce a full crop of corn, wheat or oats the following year. I am of the opinion that the area seeded will largely increase as their merits become better known. They will not supplant clover in the middle West, but south of latitude 39 degrees 30 minutes they do well on any soil that is not naturally wet and soggy. For the peculiar whitish, early baked soil of southern Illinois, parts of Indiana, Ohio and Missouri which are slow to yield up the fertility they contain they are a grand thing. In these sections they will soon be extensively employed, as clover is farther north, for unlocking the stores of fertility in the soil, and for supplying an excellent quality of roughage for dairy-cows.

Like all other things they have their failings. In a wet season the growth is so rank that very little seed is formed, while the lower parts of the vines are injured for hay. Like rank clover they are slow to cure, and for hay must be cut in dry weather and stored in a dry place. A shower injures them about the same as clover. If they are dried too much the leaves break off and most of them are lost. Owing to their clinging nature cow-peas are rather difficult to handle in the field, on the wagon and in the mow, but probably not more difficult than long clover.

My friend, the orchardist, has tried several plans to thrash out the peas with an ordinary thrashing-machine, but without much success. So many of the peas were broken that he finally gave it up, and now imports all of his seed from Virginia. Many farmers, however, thrash out all they need for seed with a flail or by trampling with horses.

I feel confident that ere long some genius will invent an inexpensive attachment to the thrashing-machine that will rattle out the seed rapidly without injuring it in the least and deliver it into the half bushel clean and free from hulls or trash. Then seed can be procured much cheaper than now.

To show the value of cow-peas as stock food I give the figures of the Department of Agriculture:

	Water.....	Ash.....	Protein.....	Fiber.....	Nitrogen.....	Fat.....
Cow-pea hay....	10.7	7.5	16.6	20.1	42.2	2.9
Cow-peas.....	14.8	3.2	20.8	4.1	55.7	1.4

For comparison I add the following:

	15.3	6.2	12.3	24.8	38.1	3.3
Clover hay.....	10.9	.5	10.5	2.1	69.6	5.4
Corn.....						

When we remember that protein is the most valuable constituent of these feeds the true value of cow-peas and cow-pea hay can be readily understood. Harvest this hay as carefully as clover, and store it in a dry place, and you will have a splendid feed. Some farmers contend that showers do not injure it in the least. Don't be misled by their "guesses." Keep it dry.

FRED GRUNDY.

OUR FARM

FARM THEORY AND PRACTICE

EARLY PLANTING.—It is the rule that plants give the best results when their growing season is made as long as possible. Very few soils supply plants with material for growth as rapidly as this material could be used by the plants. When a soil is able to do this—is very rich, as we say—a short growing season is sufficient to make a maximum crop in many instances; but when an ordinary soil is used for the production of a crop the normal growing season of the particular crop is none too long for that crop, and will most fully insure success if no other factors enter into the problem, such as danger from frosts, heat, insects and plant diseases. Everything else being equal, we want the longest possible period for growth, and in the case of most crops it is the experience of successful farmers that it pays to push the work and plant early.

SEEDING OATS EARLY.—The advisability of early seeding is marked in the case of oats. Where it is necessary to break the land for oats fall plowing is usually best. The first working-days of spring can then be used for harrowing and seeding. If the soil runs together somewhat during winter, the disk-harrow is an ideal implement for loosening it and making a seed-bed. This harrow does not work satisfactorily in very stony land, but in ordinary soils it puts fall-plowed lands into better shape for seeding in the spring than the spring-plowed land would be, loosening the surface and leaving the remainder firm and moist, which is the proper condition of land for oats. The harrowing may be done rapidly, making it possible to get oats into the ground early. Hot weather is injurious to this crop, and early growth and heading-out of the plants is an important consideration.

PLOWING EARLY FOR CORN.—Corn thrives in a fermenting sod, one that is fresh-turned and subjected to heat and moisture, but experience indicates that early plowing of sod-land for corn is safest. Two reasons for this appear: Early plowing helps to insure early planting; that is, the planting that is done as soon as the ground warms up sufficiently for a tender plant, and early-plowed land holds the most moisture during drought. In a summer that is wet the sod-land that is not broken until just before time for planting does the best, because a spring growth of grass is obtained to help out fertility, and the freshest sod remains the loosest and driest in such a summer; but drought is the usual midsummer condition, and moisture, with early planting, is the prime consideration. Four years out of five the early plowing gives the best results—planting is earlier and moisture is more easily held during drought.

SOWING CLOVER EARLY.—Very many more fields of clover are injured by heat and drought after the removal of the grain crop than by freezes in late spring immediately after the plants come up. Late seeding to clover gives small and tender plants at the time the grain crop is removed; and while such a seeding gives most satisfactory results in a favorable season, it is less safe and sure than an early seeding. It is a rare thing that a good stand of plants is not carried through all spring freezes. The seed can be sowed while the ground is frozen, and preferably when the surface has been checked thoroughly by several freezes and thaws. It rolls into the small crevices, and usually sprouts before all spring frosts are past; but serious injury from them is rare. Start the clover early, so that it will be well rooted before dry weather.

EARLY POTATOES.—There is no exception to this rule of earliness in planting in the case of potatoes that are not planted for fall growth. Potatoes cannot stand intense heat—will not make growth in it—and should be planted quite early or quite late. In the first case the idea is to get the most of the growth before August, and in the second the planting is timed so that the growth of the tubers may be made in the fall. If the potatoes are to do their growing before fall, the planting cannot be done too quickly after the ground becomes fit for plowing in the spring. I have had my potato-field covered with snow after planting, with no bad results. The only danger is

that of rot in the seed when it is cut and lies in land that is not well drained, naturally or artificially. Even then rot starts in hot, wet weather more surely than in cold, wet weather.

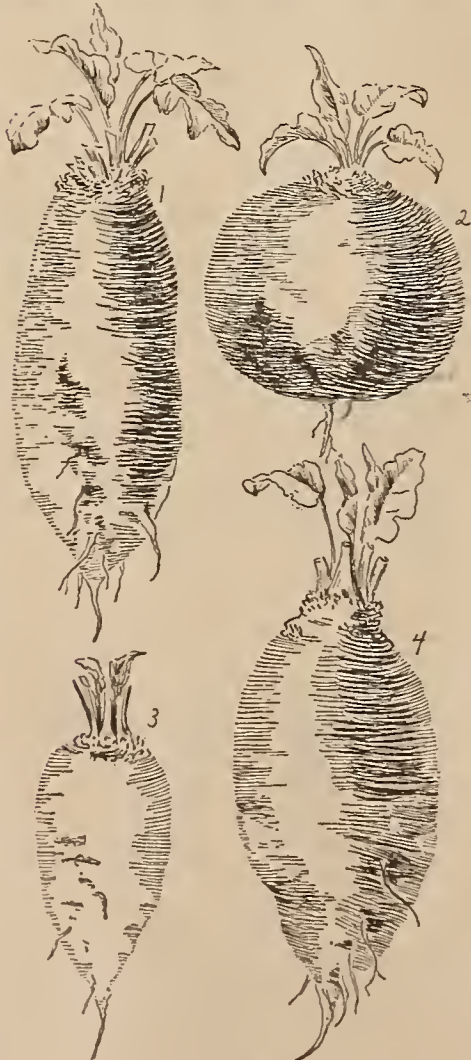
LATE POTATOES.—On account of the damage from intense heat the potato cannot use the entire usual growing season, and often does best when given only a short season in the cool portion. If we do not plant very early to catch the favorable conditions before August, it is often best, and often the only desirable way, to plant in June, so as to have the vines ready to form potatoes in the fall. In this there are advantages. The Colorado beetles are often escaped entirely, and the danger of early blight is rendered the smallest possible. The very young and vigorous vines do not suffer, and later in the growing season the blight germs are not active and do not attack the vines. It is largely a question of temperature in growing potatoes, and either spring or fall is best. This applies to all northern states in the latitude of Indiana and Ohio.

PUSH THE SPRING WORK.—Further illustration of the desirability of a long growing season, and consequent early planting, might be found in the case of winter wheat, were it not for the Hessian fly. The rich soil may be planted late with safety, but the ordinary soil needs nearly all the fall to make such plants that the prospect for a crop is satisfactory. The fly comes in to delay the seeding, and delay is usually best, but if it were not for the fly we could seed early and get a mat of thrifty wheat-plants before winter. The wheat really needs its full growing season, and the fly does more injury by causing delay than it does in the early-sown fields, bad as that injury is. But here we are helpless, while in spring planting of usual crops we are not helpless. Push the spring work, plant early as a rule, and give crops a full season for growth.

DAVID.

ROOT-CROPS FOR STOCK

Among the most intelligent feeders root-crops are now recognized as a most important supplementary ration and always to be fed to advantage to horses, cattle, sheep, swine and poultry. If there is any question about stock having a liking for root-crops, it will be set at rest on observing the avidity with which they are eaten. In mid-winter my stock will leave grain any time for a mess of roots cut up into small pieces and fed mixed with a warm bran mash. For a "regulator" nothing excels the root-crops. In my practice, to avoid any possible taint to the milk, I feed roots at night, and by milking-time the next morning not the slightest taint will be noticed in the milk.



MANGEL-WURZELS AND BEETS

In feeding roots to poultry I select two or three mangels, chop them fine and mix with the morning mash, varying the plan occasionally by splitting a few of the roots into quarters and placing them where the

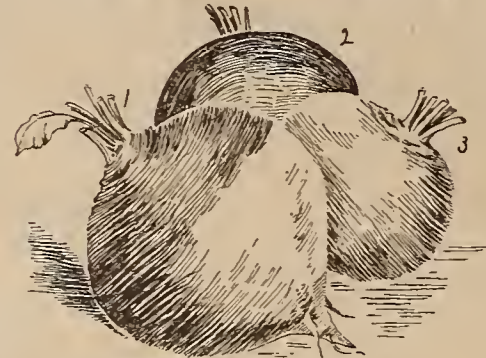
hens may pick at them between meals. Other roots are fed in the same way, and sometimes, by way of variety, they are cooked with small potatoes and fed warm—a sort of "boiled dinner," for scraps of meat are boiled with the vegetables. I find an



CARROTS

occasional feed of roots to stock an appetizer than which there is none better. Even the horses expect a share when they see them around.

I grow for stock-feeding the varieties of mangel-wurzels, carrots and turnips or rutabagas shown in the illustrations, and though my soil is light, it is fairly rich and deep, so that the crops are good. I have tried nearly all of the approved kinds for



TURNIPS AND RUTABAGAS

this purpose, but in my light soil have succeeded best with those here named and shown.

CARROTS

Of the carrots I prefer Danver's Half Long Scarlet, No. 1 in the illustration, Nichols' Improved Long Orange, No. 2, and Large White Belgian, No. 3. The Danver's is orange-red in color, smooth, attractive, and an immense yielder. The flesh is sweet, crisp and tender, and the root short and blunt in form. It is of finer and more delicate grain than the other sorts, and I have no difficulty in selling any surplus in the open market.

Nichols' Improved is early, productive and of good quality; though early, it is one of the best-keeping sorts I have ever grown.

The White Belgian is coarse, of large size and not so delicate in flavor as the others, but the flavor is peculiar to itself and is greatly relished by cows and swine, although not so attractive to horses and poultry. The variety will easily keep from harvest to late spring.

MANGEL-WURZELS AND BEETS

The Colossal Long Red mangel-wurzel, No. 1 in illustration, is one of the most valuable varieties with me. The roots are large, deep red in color, of good flavor and quite succulent. Although it requires a heavy soil to grow this to perfection it does well on my sandy soil, and is much liked by the cows.

The Orange Globe, shown in No. 2, does especially well on light soil, as it grows almost entirely aboveground. The root is nearly round, the skin dark orange, the flesh white and of good quality, and it is a good keeper.

I grow the French White Sugar beet, shown in No. 3, for its fine quality. The roots are of fair size (will grow to a large size in heavy, deep soil) and very sweet—so sweet, in fact, that many of them find their way to the table, to the sorrow of the cows, who are exceedingly fond of them.

The Improved Mammoth Long Red, No. 4. I grew last season for the first time, but even on my light soil the yield was good. The roots are large, deep red in color and of good quality.

TURNIPS AND RUTABAGAS

Among the rutabagas and turnips the Long-Island Improved rutabaga, shown in No. 1 in the illustration, is also known as the American Purple Top. It grows to a large

size, and in yield, with me, is ahead of the other varieties. The quality is first-class, and the roots keep well in an ordinary barn-cellar.

Yellow Aberdeen Purple Top turnip, No. 2, is an old variety, but one of the best. The roots are round and of medium size, the flesh tender and sugary, yet of firm texture. A splendid keeper. This I find one of the best varieties to grow for market as well as for home feeding.

No. 3 is the Purple Top White Globe, which I grow for market, for use on the table and for stock. It is early, globe-shape, of fine quality and a good keeper. On my soil it is the heaviest yielder of any variety.

VARIETY OF CROPS FOR HOME FEEDING

In this state (New Jersey) the tendency among the farmers is to devote too much time and ground to the inevitable corn or potatoes, and the same state of affairs exists in other places. Near the summer resorts in this state our farmers grow enough "truck"—vegetables and (poor) small fruits—to feed forty times the number of summer visitors and the necessary crops for home feeding are neglected. Some of us seem to be losing sight of one of the first principles of good farming—that all the food for the family and stock should be grown on the farm if possible, and the surplus turned into money. We are working too much on the reverse of this plan—selling everything we grow for the sake of handling more cash, which never is sufficient to cover the needs. One of the most pitiful sights, to my mind, in a farming community is to see a bale of hay carted down the lane of a farm by horses that look as if they needed every wisp of it to make up for stunted meals. Though lamentable, the sight is by no means uncommon. There are doubtless other varieties of root-crops which will do as well or better on heavy soil than those here shown, but on light soil one will not go far astray by growing these varieties.

An acre of ground put into root-crops will help out wonderfully next winter. Try it this coming spring, and become a convert to the idea of variety in feeding stock as well as the family.

GEO. R. KNAPP.

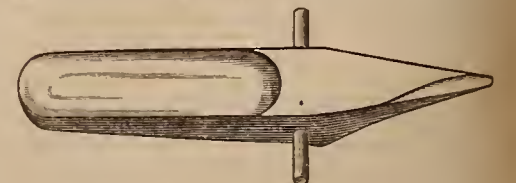
CUT FEED AND BEET-PULP

Long corn-stalks are troublesome to feed, make indifferent bedding, and are a thorn in the flesh in handling and spreading manure. With the good feed-cutters, which can be had at very moderate prices, it is poor economy to make the farm get along without one; and having one, every stalk should go through it. Experiments have shown that much more of the stalk is consumed by stock when it is fed cut. Corn stover is a carbonaceous feed, and should be supplemented with some nitrogenous feed. English feeders utilize root-crops, which are sliced or "pulped" and then mixed with chopped hay, or "chaff" as they term it. This is then sprinkled over with meal and thoroughly mingled by shoveling, forming a very complete and palatable feed. This method suggests some such operation by farmers who have beet-pulp available from beet-sugar factories. Farmers near these factories are learning to value the pulp as stock and dairy feed. Last year the Rome, N. Y., factory found difficulty in getting rid of its pulp; this year there is a demand for it. As a matter of fact corn stover and sugar-beet pulp form an excellent combination. The stover is largely carbonaceous, containing but little of muscle and bone producing elements, while the sugar-beet is a nitrogenous food and the beet-pulp even more so, as the twelve or fourteen per cent of sugar removed takes away no nitrogenous but only carbonaceous matter, thus leaving a food deficient in the very properties which the corn stover supplies.

GUY E. MITCHELL.

A CHURNING-PIN

A churning-pin is a combination of a long, narrow spoon and a spatula. When the churning approaches its closing stage it serves well for taking out samples of butter, the hollow side of the pin being run down



along the side of one of the dashers. After the butter has been taken out of the churn, during the working, the flat end of the pin may be employed in removing small grains of dirt, in breaking the bulk for trial, etc. In Danish creameries and home dairies this pin is of considerable importance, and succeeds the thermometer when the churning is at an end.

J. CHRISTIAN BAY.

NOTES FROM GARDEN AND FIELD

CATALOGUE REMINDERS.—A study of the catalogues is always interesting and suggestive. It reminds us of many personal experiences, some of which we had to buy rather dearly. It also reminds us of many good things, pleasing acquaintances and profitable lessons, some of which we might forget without an occasional reminder. For these reasons I continue my review of seed catalogues. Peter Henderson & Co.'s comes next. It is the gayest among those I have from New York City, containing a number of fine colored plates and artistically colored covers. Like Thorburn's, it is very complete, and offers all kinds of seeds, all kinds of plants, small fruits, implements and even cut flowers, the latter a department added to it this year.

SOME NOVELTIES.—One of Henderson's novelties for '99 is the Metropolitan sweet corn. It is true that there is plenty of room for improvement in our first early sweet-corn varieties. Cory is early, and the ears are comparatively large, but the plant, like all other sorts of its class, is very dwarf and very subject to smut, and the quality of the kernel is not what we look for in a standard later sort. If this Metropolitan proves to combine thriftiness of plant, size and quality of ear and earliness (coming only two days after Cory) it would be an acquisition indeed. I have not had the opportunity to try it. Of course, expect to do it this year. As for smut, I believe it will attack all early sorts, and late ones, too, on land once infected with smut spores or manured with infected manure. A safe plan is to plant on new land, and use chemical fertilizers only.

Another novelty is the Waldorf lettuce, claimed to be "equally useful for forcing as for open-air cultivation." I must have this, of course, as I am trying all varieties offered as superior for growing under glass. I like close-heading lettuces, as this Waldorf is claimed to be, and heretofore have considered Landreth or Buist's Hothouse lettuce most suitable for my purposes. The Grand Rapids makes a beautiful, curly mass of leaves, but no heads.

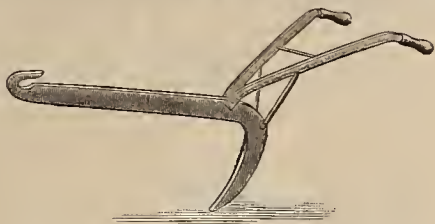
Sweet Heart watermelon is placed among the novelties, and highly spoken of as one of the earliest and best. I have had this sort on my grounds for three years, and shall plant it again. It grows to a very large size when only few fruits are allowed to grow on a plant. It is seasonably early, has a thin skin, melting flesh and fine flavor. Almost all seedsmen catalogue it. A new watermelon sent out by this firm as "No. 3" last year is the Sweet Siberian. This is of the Russian type, perhaps something like the Volga, which in some seasons has given me a great deal of satisfaction. It is recommended as a variety especially suited to northern localities. I believe that the Russian sorts to do their best, and especially acquire all the sweetness and richness of flavor which it is possible for them to acquire, should be grown in soils of a rather sandy character. Perhaps this is also more or less true of all watermelons, as it is true of muskmelons, sweet corn, sweet potatoes, etc. The Sweet Siberian has flesh of a rich orange buff color, and as sweet as any variety in cultivation. All the Russian sorts which I know seem to be especially sweet.

Among tomatoes Henderson & Co. offer the new Freedom. It will be remembered that years ago they gave us the Early Ruby, a variety that had the advantage of extreme earliness, fruit often setting on plants in the greenhouse and bringing it to maturity after the plants were transferred to open ground. The Freedom is claimed to be as early, and, besides, equal to any other sort for good form, solidity, color and any other essential quality. I had this Freedom on the grounds last year, but thought I had others just as early and as good. However, I will give it another trial. The earliest among large-fruited varieties I found in Brill's Early, which I shall grow again this year. Another tomato novelty I find offered as Crimson Cushion, a tomato of the Ponderosa class, and claimed to be the earliest large tomato, almost seedless, solid as beefsteak and as smooth as an apple. I found the Ponderosa to be the mammoth among tomatoes. It had few seeds, being so solid that I now remember I suggested the name Beefsteak tomato for it. But I am not so very fond of these

very large, seedless sorts. I like to have them on the ground for the sake of novelty and curiosity, but for real, practical, everyday use and value I believe many of our standard sorts surpass them.

FALL LETTUCES.—Any kind of vegetable or any other produce will sell when you can place it on the market at a time that nobody else furnishes it. I found that to be the case with lettuces at various times during early and late fall. Good heads go like hot cakes at such times. I used Morse, Mignonette, Salamander and other summer sorts for late sowing. Henderson & Co. recommend the Mammoth Black-seeded Butter as a good sort for all seasons, but particularly for sowing about August 25th (near New York City; north, earlier) for late fall use.

NEW TOOLS.—The Hendersons also issue a tastily arranged catalogue of tools and implements. Among these tools I find a wrought-iron grub-hook, or stone and root puller. I do not believe that there is a patent on this device, and it is an extremely simple affair, which any blacksmith can make. So if any one has a pair of discarded plowhandles, he might get up a home-made affair constructed on this plan. Another tool offered in the same catalogue is the Meeker disk smoothing-harrow. I have men-



tioned this excellent garden harrow, with which clean ground can be fitted for seed-sowing and planting as perfectly as it can be done with a garden rake, in several of my garden books, and consequently I am all the while receiving inquiries where this tool can be had. This reference may be taken as a reply to would-be inquirers. I know only one other seedsman (Mr. Gregory, of Massachusetts) who catalogues it.

I am glad to see catalogued also some fertilizer-drills for one-horse power as well as for man-power. For years while I used fertilizers more freely than I do now I have been wishing for just such a man-power machine as I believe is now found in the Advance. I have not yet tried it. Probably some of my readers have, and I would be glad to have them tell us how it works and how they like it. The catalogue also advertises the Breed weeder in its various forms, an excellent tool, by the way, for clean, mellow soils; also the Planet Jr. and Iron Age goods. I have used all these with perfect satisfaction, and can commend them to my friends. I prefer the Iron Age hand-drill and wheel-hoes (either separate or combined) mostly on account of their larger wheels. They slide over obstructions with more ease than small-wheeled implements. There are other tools, too, which are very handy on the farm, such as root-cutters, clover-cutters, green-bone cutters, etc.; in fact, there is hardly a tool or implement used on the farm and in the garden that you could not find here catalogued; but I will have to let you look up all these things for yourselves.

LETTUCE-FORCING.—My chief winter crop (greenhouse) is and remains lettuce. I have it on the table almost any day right along. Of course, when summer comes I do not care much about it any more, at least up to fall, and other vegetables have to be looked to to please my palate. The severe cold this winter at times penetrated portions of the greenhouse (on the west side) and touched up some of the lettuce and radish plants. I make it a practice, when fires happen to get a little low during coldest nights, and some of the plants are frost-bitten, to give the latter a good sprinkling in the morning. This usually draws out what little frost there is in them. The greenhouse crops have thus far been almost entirely free from the green lice which often prove such a serious pest. These lice could not stand the repeated fumigations with tobacco-smoke (from burning moist tobacco-stems) which were given in the forepart of the forcing season and while the plants were yet small. When lice are once allowed to get a hold in large lettuce-plants, where they can hide in the folds of and under the heavy foliage, the task of fighting them to a finish is almost hopeless. Timely action is the only safe course.

T. GREINER.

ORCHARD AND SMALL FRUITS

CONDUCTED BY SAMUEL B. GREEN

JAPANESE PERSIMMONS

This comparatively new fruit seems to be gradually winning its way to popular favor. Its many good qualities suggest that it should be much more widely planted, both for home use and for market. It grows readily in all parts of Alabama, and is a very abundant and constant bearer. It starts into growth quite early in the spring, so that the wood is occasionally injured by late freezes, but the flowers, coming as they do on the new wood of this season's growth, are never killed by cold. Trees begin bearing very young, often the first year after planting. They are of dwarfish habit, and may be planted as close as ten or twelve feet apart each way. They should receive liberal fertilizing and good cultivation to enable them to carry their heavy annual crops.

The dark-fleshed early kinds, like Zingi and Tabor's No. 23 and No. 129, are badly wasted by the attacks of various fruit-eating insects, and they seem somewhat inclined to crack and rot in wet weather. It is doubtful if they will prove as profitable for market as the later yellow-fleshed kinds. They have, however, a rather more sprightly flavor, and will be relished by people who find the others a little too cloying.

Our present experience would indicate Okame, Yeddo Ichi, Costata and Yemon as the best market kinds, and valued about in the order named.—Alabama Experiment Station Bulletin, 1898.

INQUIRIES ANSWERED

Pruning an Old Orchard.—A. C. A., Keeseville, N. Y., writes: "I have an old orchard that needs considerable pruning. It bears more or less every year—about one third crop last year. Will it be better to prune it this winter or next spring?"

REPLY:—Better prune it during mild days in March, before the buds start. Cover all wounds over three fourths of an inch in diameter with paint or wax.

Barrel Strawberry-beds.—I. B., Ft. Scott, Kan., writes: "I have read in FARM AND FIRESIDE of strawberry-beds in barrels, and having a very limited space for garden want to make one, but do not know how to protect them through the winter. Kindly give me some information on this point."

REPLY:—The best way of giving protection to barrels having strawberry-plants in them is to bank up the barrel with earth, covering it completely, and then cover the whole with about a foot of straw, hay or other material. They may also be wintered in a cold cellar, but must not be allowed to dry out, and in a warm cellar they are liable to rot.

Fertilizer for Plum and Cherry Trees.—T. M. E., Atchinson, Neb. On the average new soil in your section no fertilizer is needed for plum or cherry trees if they get good cultivation. Stirring the soil so continuously that a dust-blanket is kept on the land all summer is the most important thing in raising orchard crops in your section. If, however, you happen to have a piece of very poor land, the best fertilizer for you to use is plenty of good stable manure, and it does not matter much if it is quite coarse. Stable manure not only adds to the soil those elements necessary for plant-food found in commercial fertilizers, but in addition adds humus to the soil which makes it more retentive of moisture and gases and better adapted to the growth of plants.

Seedling Lemon-trees.—H. H. R., Culver, Kan., writes: "I have a lemon-tree about five or six years old that has not borne any lemons yet. It is a large, thrifty tree. Must a lemon-tree be budded before it will bear or can it be pruned in such a way that it will bear without budding or grafting?"

REPLY:—Seedling lemons and oranges seldom flower until more than ten years, and sometimes not satisfactorily even then. It is customary to bud them with some dwarf early-flowering variety, but since the introduction of the Otaheite dwarf orange there is no need of bothering to bud seedlings for window culture, as this variety is much superior to the larger sorts, as it flowers and fruits abundantly in an ordinary window when not over one foot high. It can be bought at florists for thirty-five cents each.

Current-borer—Currants Dropping.—J. T. P., Hubbard county, Minn. The trouble is that the stalks of your currants are infested with the currant-borer. This insect winters over in the stalks, and the remedy is to cut out and burn those infested in the winter or early spring. The infested stalks can be told from the others by their darkened appearance after a little practice, and at this season the borers can be found inside, and the pit will have been dug out where they have worked.—I think the trouble is due to late frosts, which are common in your section. Possibly if the bushes were covered with earth or straw in winter, as is done in your section with raspberries, and the season of flowering thus delayed as much as possible, it might improve the chances of a crop. The Red Dutch, by the way, is the most reliable variety for your section. But the trouble of which you complain will not occur very often.

Bark-blight—Black-knot.—A. W. P., Novelty, Wash. This is a form of bark-blight that occasionally does much damage in your section. I do not know the cause, but think it different from the bark-blight of eastern states, and partly, at least, due to climatic troubles. Shading the trunks by low heading or wrapping may have a tendency to prevent it, but probably the true remedy is in seeking out varieties that resist the disease, as some sorts are more liable to such diseases than others.—By the black-knot on fruit-trees is meant the black, rough swellings which commonly occur on plum, cherry and occasionally on peach trees. Our native choke-cherry is especially liable to this trouble, and often is much mutilated by it. It is a communicable fungoid disease, and several eastern states have laws against it that require the infected parts to be burned. The remedy is to cut off the infected part several inches below the knot and paint with thick Bordeaux mixture. If the knot occurs on the trunk, cut away all you can of it, and paint the wound as recommended.

Spraying Peach-trees with Whitewash.—Prof. Whitten, at the Missouri station, seems to have had good success in preventing some injury to the buds of peach-trees by whitening them with common whitewash, by which he was able to retard the blooming season from one to two days. He also found that less buds had been winter-killed on those whitened than on others, and they opened more buds. The principle he worked on is the well-known principle of physics that dark colors absorb more heat than light colors, and he thought that peach-trees covered with whitewash did not start quite so early as those not covered for the reason that they did not warm up so quickly. He found that in the sunlight there would frequently be a difference of twenty degrees between thermometers with their bulbs covered with red or purple cloth and those covered with white cloth, and those covered with colored cloth always registered the highest in the sunlight, while in the shade they were always the same. This would seem to be an experiment well worthy of trial by orchardists, although the Alabama station did not get satisfactory results in its trial of this method last year.

Care of Palms.—C. M. C., Capac, Mich. Many of the palms are very hardy plants against drought, insects and dry air, and have the power of growing in the shade even where the air is very dry, and on this account are well adapted for house-plants, where they do not get any direct sunlight. In my experience more palms are lost in dwelling-houses from getting too wet than from any other one cause. They are generally set, pot and all, into the ornamental flower-pots (jardinières). When thus placed too often they are supplied with water each day without regard to their need of it, and very often water stands in the jardinière several inches deep. Now, nearly all our palms need friable, open soils, and are very impatient of standing water or even very wet soil around their roots, and overwatering hurts them. Occasionally they may get too dry, but this is seldom a cause of injury, and they are greatly improved by careful watering. Another common cause of injury is coal-gas; again, the soil sometimes gets full of angleworms, which makes it too solid; red spider sometimes attacks the foliage, and makes it look brown; occasionally palms are lost by freezing, for while they are very hardy in some ways, our commonly cultivated kinds are often killed by a very little freezing. The remedies for these sources of trouble are to not put the palms in jardinières or else set them up from the bottom on a few stones or coarse gravel, and then see to it that they have no standing water around them. Put plenty of drainage in the pots containing the palms, and use a soil that contains considerable sand and leaf-mold. They should be repotted at least once each year. If red spiders are troublesome, dip the top (not the roots) into water once each week, and let it stay there for ten minutes.

Pruning Peach-trees.—H. M. S., North Monroeville, Ohio, writes: "I have a few Late Crawford peach-trees, and they bore for the second time last fall. When the man that goes over the neighborhood pruning trees, grape-vines, etc., came to my peach-trees he said, 'These are the finest peach-trees I have seen. It is too bad to cut them back and lose so many of the fruit-buds.' So he did not trim them a bit, and I had to prop up the branches, they were so full of fruit, and then could not prevent some from breaking. By the growth of last year and the year before the trees are too tall. Please tell if it will do to cut off all last year's growth, or will it kill the trees to cut them back so? Of course, if this is going to be a peach year I would not have any peaches, but I should rather not have any than to have them grow so tall."

REPLY:—Your man made a mistake that is common to many very good fruit men in not pruning your peach-trees last spring, and thus thinning out the fruit. He should have known that in the North peach-trees when they bear are liable to set too much fruit, and as a consequence it is small in size, brings a low price and exhausts the trees more than fewer large fruit. It is probable that you would have had more good marketable fruit on your trees had two thirds of the fruit been picked off of them. In pruning peach-trees, from one third to one half the new wood should be cut away. It probably will not seriously injure your peach-trees even if you cut them back severely, although it will knock out your chances for a crop the coming season; but peach-trees come into bearing so quickly that it seems to me it would be best for you, if you have room, to set a few trees to take their place, and so not lose the chances of a crop in 1899. If you decide to cut them back, be sure and paint all the large wounds with white lead and oil, and prune early in March before the buds start.

THE BEST KIND OF HIRED HELP

THE reason that hired help on farms is so unsatisfactory is because the men are not educated to the business. Like many farmers, they farm it because they cannot get anything else to do. The reason they cannot get anything else to do is that nobody else will hire such trash. The farmer hires what nobody else will have. Men who have always worked on farms, either as hired hands or as farmers' sons, are good workmen, and satisfactory. They command good wages, and generally earn them, in comparison with the men who work on farms as a makeshift. It is provoking, annoying and deplorable that the supply of satisfactory farm-hands is decreasing every year.

I try as far as possible to hire farmers and their sons when their own work is not pressing. I have much to do when ordinary farming is at rest, digging plants early in spring and covering strawberries and digging blackberry-plants late in the fall. These farmers and farmers' sons are generally satisfactory. I can stand the ordinary hired man (I refer to the scrub) about six or seven months, and then I am glad to be relieved of his presence.

I have pity for the man who is compelled to put up with the insolence of these men. They get most of the profits and are utterly uninterested whether they render value received or not. Their money is spent on bicycles, liveries, pool-playing or in gambling. About all the young men I know who work on farms in a certain community get together every Sunday and play cards for money. I cannot conceive of a more demoralizing practice. After such experience young fellows are never content to work faithfully for honest wages.

I have nothing but good words to say for the honest, hard-working hired man. He may get more than his just share of the farmer's income, but he is not to blame for the price of produce and the fact that farm wages are out of proportion to the farmer's receipts. He is a cheap man compared to the other class. The very best men that I have ever hired are those men who save their wages. These, however, are as scarce as hens' teeth.

L. J. FARMER.

SOUTHERN AGRICULTURE

Northern farmers must not overlook the fact that there is as decided a wave of agricultural development in the South as there is mechanical. The efforts of such men as our secretary of agriculture is telling in the way of determining Southern farmers to largely widen out the range of their planting. The South affords peculiarly good opportunities for grazing, for poultry-raising, for the production of hogs and of horses. Secretary Wilson insists that the young farmers of the South must have agricultural schools and dairy schools to give them the most advanced views in the way of production. It will not be long before the cotton states send us our spring lambs and spring chickens, as Florida already sends us our early vegetables. Only an agricultural bigot can object to this, because it has always proved true that the development of an industry in one place calls for a compensative industry in another. There is always a readjustment going on of the crops which it is advisable for us to grow. A successful farmer is the one who can promptly adjust himself to circumstances.

E. P. POWELL.

CURING GULLIES

On many Virginia farms there are deep gullies, and little gullies which in a few years will wash out into deep ones. In the lower Mississippi, Eads discovered how, by sunken jetties, to use the same water-force which created shallows and bars in destroying them. So in gullies the same force which creates them can be turned to account to fill them up. To accomplish this engineering feat it is only necessary to have cedar or pine boughs or brush. The brush should be laid in the gullies "against the current," that is, with the butts pointing toward the lower end of the gully. Freshets of water will not wash them away, as would be the case did their limbs trend with the flow of the water, but on the contrary earth will be washed and lodged wherever there is an acute angle formed by a crotch, and the gullies will gradually fill up, until in a couple or three years only a gentle depression will remain, which can easily be leveled, if desired, with a plow. Brushing gullies is good winter work. A few loads of fire-wood trimmings can be distributed about on most farms to good advantage.

GUY E. MITCHELL.

NOTES FROM CORRESPONDENCE

FROM OREGON.—As our minister said recently, "This is an especially favored land." The residents of the Willamette valley are a prosperous and contented people. Last season's enormous prune crop has been mostly shipped, at fair prices. The hop-growers feel well recompensed. Wheat is low, many holding for better prices; oats, forty cents a bushel; eggs, fifteen cents a dozen; butter, twenty-five cents a pound; milk-cows, \$25 to \$35 a head; horses low. C. A. D. Turner, Marion county, Oreg.

FROM FLORIDA.—Macclenny, the county-seat of Baker county, is twenty-eight miles west of Jacksonville, a city of about 32,000 inhabitants. The principal crops that we raise here are corn, cotton, sweet potatoes and sugar-cane. Irish potatoes and all kinds of vegetables and fruits do well. Corn yields from ten to twenty-five bushels an acre. The average yield of cotton is 500 pounds an acre. Sweet potatoes and Irish potatoes will, with proper care, yield 200 bushels an acre. Sugar-cane will yield enough to make ten barrels of syrup to the acre. Strawberries do well here. We raise pears and ship them to New York City, where they sometimes bring \$4 a barrel, netting about \$2.50 a barrel. Unimproved land is worth from twenty-five cents to \$5 an acre. The timber is mostly yellow pine and cypress. Macclenny, Fla. D. E. P.

FROM ILLINOIS.—Pope county is one of the best fruit counties in the state. Fruits of nearly all kinds do well here. Pope county is in the southern part of the state, on the Ohio river. Our greatest drawback is that we have no railroad. Fruit is plentiful, and price is low. Pope county is about three fourths under cultivation. It is one of the oldest counties in the state, having been organized in 1816. Golconda, on the Ohio river, is the county-seat. Stock-raising is the chief occupation. Most of our land is very productive. The soil of the upland is clay, and of the lowland a sandy loam. Hay, corn and wheat are the main products raised. Land is cheap, selling at from \$8 to \$20 an acre. There is good timber, such as cypress, oak and hickory. We have an abundance of good water. The mineral springs in the western part of the county have a good reputation as a watering-place. Our climate is changeable. Golconda, Ill. C. E. B.

FROM CALIFORNIA.—This valley is on the Santa Fe route, contains about 8,000 acres of fertile black sandy and red granite soils, and is producing large crops of grain, vegetables, apples, peaches, figs, olives, grapes, oranges and lemons. Where irrigation is practised the water is raised from wells ten to twenty feet deep by windmills and gasoline-engines, at a cost of about two cents a thousand gallons. San Diego, thirty miles distant, is our principal market. We are eight miles from the ocean, and 600 feet above it. We think we have the finest climate on earth. There are over 100 families and five school-houses within a radius of four miles. The land is divided into tracts of five acres and upward, and is sold at from \$25 to \$35 an acre. The people are of the better class, energetic and thrifty. No saloons are allowed here. Being outside of an irrigation district we have no water-tax to pay. Settlers of a good character will meet with a cordial welcome. San Marcos, San Diego county, Cal. W. G. J.

RECENT PUBLICATIONS

CATALOGUES RECEIVED

- E. T. Flanagan, Belleville, Ill. Catalogue of bee-keepers' supplies.
T. J. Dwyer & Son, Cornwall, N. J. Catalogue of the Orange county nurseries.
D. H. Hill, Dundee, Ill. Hill's nursery catalogue. Evergreens a specialty.
S. B. Davis & Son, Purcellville, Va. Catalogue of tested roses, plants and bulbs.
F. Barteldes & Co., Lawrence, Kan. Catalogue of farm, garden and flower seeds.
D. J. Lambert, Apponaug, R. I. "Pocketbook Pointers"—a manual for poultry-keepers.
D. Landreth & Sons, Philadelphia, Pa. Catalogue of Landreth's seeds, handsomely illustrated with half-tones.
W. Atlee Burpee & Co., Philadelphia, Pa. "Burpee's Farm Annual for 1899" tells "the plain truth about seeds."
John A. Salzer, La Crosse, Wis. Mammoth catalogue of seeds, plants, small fruits, garden and farm supplies.
Harry N. Hammond, Effield, Wis. Illustrated catalogue of northern-grown seed-potatoes, farm, garden and flower seeds.
Ellwanger & Barry, Rochester, N. Y. Hand-some catalogue of novelties in fruits and ornamental trees, shrubs, roses, etc.
L. L. Olds, Clinton, Wis. Catalogue of farm and garden seed. Specialty—"Potato Pingree," a grand, new extra early variety.
J. G. Harrison & Sons, Berlin, Md. Nursery catalogue. Specialties—"Excelsior" strawberry, "Miller's Red" raspberry and the "Carman" peach.
The Henry Phillips Seed and Implement Co., Toledo, Ohio. Illustrated catalogue of seeds, agricultural implements, carriages, wagons, fertilizers, etc.
Wm. Henry Maule, Philadelphia, Pa. Illustrated catalogue of Maule's tested seeds that go out under his "four-leaf clover guarantee."

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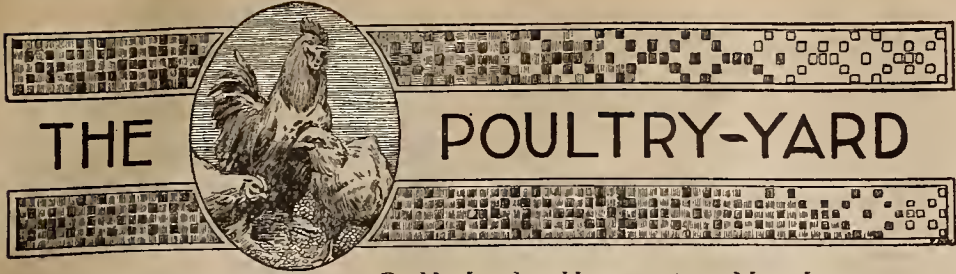


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SELECTING STOCK WHEN PURCHASING

WHEN you wish to add to your stock be careful to select from well-known yards, as you may easily bring both lice and disease into your flocks. To examine the hens, first look at the combs, which should be a bright, scarlet red, thus indicating health. The legs come next, and should be free from scales or scurf and clean in every respect. If the wings are cut you may safely conclude they are good flyers, and if the males have long spurs you may know they are aged. Look carefully on the bodies for lice, and if the birds are in the coop notice the droppings, which should be of a mixed color. If the hens in the coop move about quickly and the combs are bright you will have passed over one half the points of selection, as health is the first object. Select those that are heavily feathered and with as small combs as possible, as they will stand the cold weather well, and do not take any that are molting. Never buy the cock with the hens, but first procure your hens and send off for a pure-bred cock of the breed you prefer, and thus secure uniformity in the chicks.

LESSENING THE COST

If the winter season is to be a profitable one the only safe course to pursue is not to feed fowls that are non-producers. It is unfair to credit the whole flock with loss when some of the hens have done good service and at the same time supported a lot of drones. Even the young pullets that do not fall into the ranks of the layers should not be retained, as beauty of plumage is no factor in the matter of egg production. The old hens that have finished the molting process should give a good account of themselves if not fed too highly, and as it is not difficult to get them overfat the matter of feeding should be considered very carefully. If the hens do not lay in winter it will be because the poultry-house is not warm, or they may lack a variety of food. Of the unprofitable ones that receive good treatment the most useless are the surplus males. Get them out of the way as soon as possible. Serve them on your table, or even give them away if necessary, as they are worth but little in market, though they always have good appetites and do more than their share to increase expenses.

YOUNG GREEN RYE AND OATS

When young grass, rye or oats is cut before making much growth it is watery and contains but little nutrition, too much of such food causing the hens to have "scours." Many persons have been disappointed in confining their hens on young rye as an exclusive food. It is excellent as a dietary food, but all very young grass is mostly water. It is not best to cut such for winter use, and if early oats are grown, and the crop cut when the grain is in the milky stage, the nutritive matter, on its way to fill out the grain, will be arrested in the stalk, so that when cured, the whole stalk (with grain) stored in the barn, and cut fine with a cutter, will make excellent food for the hens in winter. The oats should be cut green, just as the seed-heads begin to form.

EARLY LICE

It is a task to get into the poultry-house at night, take each hen off the roost and dust the body with some substance obnoxious to lice, yet there are times when it should be done, especially during the warm season. A mixture for that purpose, and which is cheap, is made by using one pound of sulphur, four ounces of Scotch snuff, two ounces of Dalmatian insect-powder and half a pound of carbolate (not carbonate) of lime. It must be thoroughly mixed and kept in a closed vessel. Hold the fowl's head down, and with a pepper-box dust well in among the feathers.

PRESERVATION OF DROPPINGS

The droppings should be kept either entirely dry or constantly damp. If the dry process be used the best mode is to mix one bushel of kainit (German potash salts or

sulphate of potash in a crude form) with ten bushels of fine, dry earth, muck or marl; but whatever the material used it should be fine. To every bushel of droppings add a bushel of the mixture, and keep in a dry place. Should decomposition occur the dry earth will act as an absorbent, but the greatest benefit will be derived from the sulphate of potash, which arrests the ammonia and converts it into sulphate of ammonia. The damp process is to mix the same as above, and keep the mixture damp (not wet) with soap-suds, the result being not only the formation of sulphates, but several other fertilizing compounds from the chemical action of the fat acids produced from the soap-suds.

EXTRACTS FROM CORRESPONDENCE

AN UNUSUAL OCCURRENCE.—Some time ago my chickens were troubled with a peculiar disease. They would seem rather droopy for a few days, and their neck-bones would seem to draw up and burst through the skin. I would find them dead, with their neck-bones curved out in front perfectly raw. I have told a great many people of it, but have never found any one who ever heard of such a disease. It was in Kansas, in very dry weather. We were on a farm, and the chickens had free range. Please ask through your paper if any one knows anything of such a disease. I have taken your paper for years, and have often thought I would write you an account of it.

Rosalie, Wash. Mrs. R. A. M.
[It may be due to some local cause, as an occurrence of the kind is unusual and not known among the ordinary diseases of poultry. If any reader has had experience with it the information will be thankfully received.—Ed.]

A YEAR'S RECORD.—I have been a subscriber to the FARM AND FIRESIDE for nine or ten years, and would be pleased if you would publish the following. I started to keep a record of twelve White Leghorn pullets, and they laid the following number of eggs during one year: December, 1897, 109 eggs; January, 1898, 98 eggs; February, 1898, 190 eggs; March, 1898, 255 eggs; April, 1898, 239 eggs; May, 1898, 265 eggs; June, 1898, 184 eggs; July, 1898, 214 eggs; August, 1898, 152 eggs; September, 1898, 96 eggs; October, 1898, 90 eggs; November, 1898, 37 eggs; making a total of 1,929 eggs, and those at one and one half cents each would make an amount of \$29.33. I paid \$10 for feed, thereby cleared \$19.33. The chickens were kept on a lot twenty-five by sixty feet, and had a good, warm house, such as is not easy to be found; and further I must say that I got all my information from the FARM AND FIRESIDE, and must give it all the praise. Any man who keeps a flock of six hens would do well by getting the paper and follow its instructions. A. O. W. Quakake, Pa.

INQUIRIES ANSWERED

Guineas.—J. D., Attica, Kan., writes: "I have three guinea-hens; how many males should I procure?"

REPLY:—It is better to have the sexes equal, as they usually pair, being monogamous.

Pip.—J. W., St. Louis, writes: "What causes the 'pip'? Give a remedy."

REPLY:—It is a cold, the sound of "pip" being a cough or sneeze. Inject two drops of camphorated oil in each nostril and a few drops down the throat.

Breeds Being Together.—J. W. D., Drexel, Mo., writes: "I have a few Leghorn hens, and wish to keep also some Plymouth Rocks. If I keep no Leghorn males will my Plymouth Rock chicks be pure? Some of my neighbors say not."

REPLY:—The chicks hatched from eggs laid by the Plymouth Rock hens will be pure-bred.

Feeding Chicks.—F. B., Lloyd, Mont., writes: "1. Is rye (grain) good food for chickens? 2. How old should chicks be before given millet-seed? 3. What is 'animal meat'?"

REPLY:—1. Yes; it should be fed about three times a week. 2. It may be given from the start. 3. It is the commercial ground meat procured from various sources.

Ducks.—G. B. F., Sullivan, Ohio, writes: "1. What would you advise to feed ducks as an inducement to laying? 2. Which is the best breed of ducks? 3. Can fish be used for ducks?"

REPLY:—1. Cooked potatoes or turnips, thickened with bran, corn-meal and animal meat, equal parts. 2. The Pekins are preferred for "green ducks." 3. Yes; it is excellent, but is said to affect the flavor of the flesh.

Fat Hens.—O. H., Butte, Mont., writes: "1. Which should be preferred for poultry, the fine or coarse bran? 2. I killed some of my hens, and found them full of eggs which looked as though they were cooked hard. The hens were very fat."

REPLY:—1. There is but little difference, the fine bran being preferred. 2. It is not unusual, being due to the fat condition of the hens, caused by overfeeding with grain.

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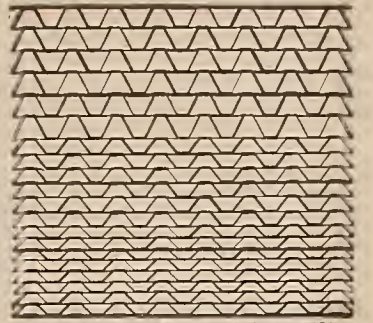
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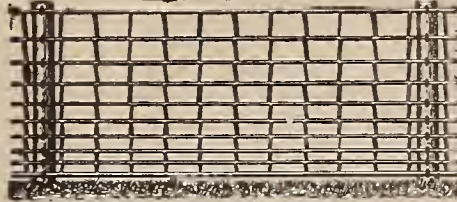
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QUERIES

READ THIS NOTICE

Questions from regular subscribers of FARM AND FIRESIDE relating to matters of general interest will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should inclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Applying Manure.—A. C. Green Bay, Wis. If your land is comparatively level and not subject to wash from heavy rainfall, haul out and spread stable manure as fast as made, on fields intended for spring crops. The corn crop can take large quantities of coarse, fresh manure.

Marking Tin.—A. E. M., Cape Vincent, N. Y. If used for tree-labels, tin strips can be marked by writing on them with a sharp, steel instrument, like the point of a file ground sharp. Bear on hard to cut through the tin coating. The rain will in time rust the tin and make the writing quite plain.

Selecting Grains of Seed-corn.—T. M. E., Atkinson, Neb., writes: "In shelling seed-corn, would you discard the grains at the butt and the tip of the ear?"

REPLY:—Yes, in order to have the grains of as uniform size as possible for regular dropping from the planter.

Overflowed Land for Potatoes.—G. C. M., Allentown, Pa., writes: "My ground is a rich, sandy loam. The river comes over sometimes, probably twice a year. Is it good for potatoes?"

REPLY:—The soil is good for potatoes, but it would be taking a great risk to plant them on land subject to overflow.

Post-lifter.—J. F. S., Ontario, Ill., writes: "In a recent issue of your paper is an article describing a post-lifter. I think a better way is to use the rear running-gear of a wagon and a log-chain with a hook at each end. Hook one end to the reach just above the braces, back up to the post and tip the reach up against the post, and then fasten the other end around the post near the ground. Use the reach as a lever, and you will find it an easy matter to pull your posts."

Raising Potatoes.—W. J. H., North Port Huron, Mich., writes: "I have just moved to this place, and wish to raise early potatoes. The soil is sandy, with clay subsoil. The land has been kept up quite well in regard to manure. Would you advise planting potatoes?"

REPLY:—Yes. From your description the soil is well suited to potatoes. Use well-rotted stable manure liberally if you have it. If not, use two hundred pounds superphosphate and one hundred pounds muriate of potash to the acre.

VETERINARY

CONDUCTED BY DR. H. J. DETMERS

To regular subscribers of the FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Veterinary queries should be sent directly to DR. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered.

Periodical Ophthalmia.—M. E. S., Atoka, I. T. What you describe appears to be a case of periodical ophthalmia. It is incurable.

Injuries Hay.—M. S., Walkerton, Ind. If you know that the hay you feed is injurious the remedy is a simple one and consists in not feeding it.

Spavin.—R. T. R., Pocahontas, Mo. Your brief statement indicates spavin. You will find the desired information in FARM AND FIRESIDE of November 15th.

Swine-plague.—A. P. U., Allen St., Ga. What you describe is a case of swine-plague (or so-called hog-cholera). Your sow very likely will be dead when this reaches you.

So-called Blood-wart.—E. L., Schell City, Mo. What you call a blood-wart is probably a case of botriomycosis. Please consult FARM AND FIRESIDE of December 1st, December 15th, February 1st and February 15th.

Heaves—Unthriftiness.—W. D., Pattonsburg, Mo. Your horse, it seems, has so-called heaves (a chronic, feverless and incurable difficulty of breathing), and this, together with his age, very likely constitutes the cause of his unthriftiness.

Abscesses.—A. S. M., Pocahontas, Iowa. If your hogs are not otherwise ailing, open the abscesses as soon as they show fluctuation, and then dress them twice a day with absorbent cotton saturated with a five-per-cent solution of creolin, and keep the hogs in clean quarters.

Cramps.—H. W. G., Ravenna, Neb. If possible keep your horse while in the stable in a loose box. It is foolishness to dose horses, or for that, any other animals with medicines before they are sick or to ward off a disease threatening only in the imagination of the owner.

Poll-evil.—W. H. M., Osage, Ohio. You will have to employ a competent veterinarian to perform the necessary operations and to conduct the treatment if you desire to have your horse cured. Such a case cannot be cured by an application of medicines, and it is impossible to enable any one not a veterinarian to successfully perform the required operations by a mere description.

Skin Partially Destroyed.—A. E., Gillett Grove, Iowa. Wherever the skin of your cow has been destroyed or been lost no new skin will be reproduced, and as far as possible scar-tissue will take its place, and where the skin is lost no hair will reappear, because scar-tissue is not capable of producing hair. Only where nothing but epidermis, or outer covering of the skin, has been destroyed hair and new epidermis will reappear.

Probably a Luxation of the Patella.—I. P. K., Eagle Foundry, Pa. What you describe looks to me, according to your description, much more like an old luxation of the patella than like some defect in the hip-joint. But as it is a case already three years old, and as the cow, according to your statement, walks sometimes as good as any cow, it is immaterial what or where the seat of the trouble may be, because in such an old case a treatment does not pay.

Feeding Rye.—J. C. K., Summerville, Pa. Rye, unless fed only in small quantities, together with larger quantities of other grain, such as corn and oats, is not a very suitable food for horses, but it cannot be claimed that it causes abortion except it contains considerable quantities of ergot; but then it is the ergot and not the rye that causes the trouble. If too large quantities of rye are fed, digestive disorders and congestions, particularly to the brain, may result.

Probably Hemorrhage in the Brain.—W. H. M., Agricola, Kan. Your horse, according to the symptoms described, most likely died of hemorrhage in the brain. A treatment would have done no good. You say the corn you fed was not of a good quality; if this means that the same was moldy or musty, or in other words, spoiled by fungi, it stands to reason that it may have been a cause of weakening the walls of the capillary blood-vessels and thus a predisposing cause of the hemorrhage.

Possibly Actinomycosis.—R. E. B., Cobham, Pa. The swelling on the lower jaw of your heifer is possibly, but not necessarily, caused by actinomycosis, or so-called lump-jaw. At any rate, the bare fact that there is a swelling in the jaw-bone does not warrant the diagnosis of lump-jaw. If it is, other more characteristic symptoms will before long make their appearance. Still, as you undoubtedly desire certainty as soon as possible, I advise you to have the animal examined by a veterinarian.

A Costive Heifer.—T. K., Manistee, Mich. There can be no doubt that your heifer calf is ailing from some disorder, but the simple fact that the same is costive and has not quite as good an appetite as other calves of the same age is not a sufficient foundation for a reliable diagnosis. It is possible that the ailment is nothing more serious than a digestive disorder, and if so, a feeding of turnips or of beets cut up in such a way that the pieces cannot, even if swallowed whole, cause choking will probably prove to be very beneficial.

Rheumatism.—F. C., Madisonville, Ohio. Rheumatism, at least as far as the ailment of horses are concerned, is a term often employed to cover a multitude of disorders, especially such as are not readily diagnosed or require a thorough and very careful examination. The term "rheumatism," therefore, is too often used to hide the absence of a correct diagnosis. I advise you to have your horse examined by a competent veterinarian and to find out what really is the matter before you resort to any treatment.

Perhaps Foot-rot.—M. A. B., Kalama, Wash. It looks as if you have to deal with a case of foot-rot. If so, keep your goats on dry ground, trim away the loose and decayed horn of the diseased feet with a sharp hoof-knife, and then dress the sores with tufts of cotton saturated with a mixture of liquor plumbi subacetati, one part, and olive-oil, three parts. A tuft of cotton pressed into the cleft between the toes will probably stay there; if not, strips of muslin may be used to keep the dressing in place. Renew the dressing once a day.

Prolapsus of the Vagina.—A. V. F., Gering, Neb. What you describe appears to be or to have been a prolapsus, not of the uterus, but simply of the vagina, which, if it had been washed off and been shoved in in time, would scarcely have damaged the animal. It is a wonder that the cow after the treatment she has received is yet alive. I do not take any stock in such stock hooks as that one you mention, and have neither time nor inclination to read them. The only advice I can give you is to have your cow examined and treated by a veterinarian.

Slavering—Vitiating Appetite. G. W. S., Bridgeton, R. I. If your horse slavers so badly as to keep the floor of the stable wet, and purges when driven three or four miles, it is evident that the food he consumes, but most likely the hay, is badly contaminated with fungous spores. Change the food, or at least the hay, and feed only such food as is sound and free from fungous spores, and the slavering will soon cease, though perhaps not at once.—In regard to the vitiated appetite of your calf, nine months old, please consult what has been said under the same heading in FARM AND FIRESIDE of January 15th and February 15th.

A Swelled Leg.—M. A., Upsale, Minn. All that I can learn from your inquiry is that your horse has a swelled hind leg and that there is somewhere a "hole," perhaps an abscess, and

therefore all the advice I can give you is to clean the abscess, to dress it twice a day with absorbent cotton saturated with a five-per-cent solution of creolin, and then when the abscess has been brought to healing to reduce the swelling by hand-dages of woolen flannel kept on from night to morning, by giving it a good rubbing every morning and evening, and by allowing the horse during the day all the voluntary exercise he is willing to take.

Chronic Swelling.—M. E. A., Oskaloosa, Iowa. Give the swelled leg of your horse every night and morning a good rubbing, keep it hand-daged with a judiciously applied baudage of woolen flannel from evening till morning every night, and give the horse every day all the voluntary exercise he is willing to take. By continuing this treatment for some length of time you will probably succeed in materially reducing the swelling, although a restoration to a perfectly normal condition may be impossible in a case like yours of long (sixteen months) standing. If you, when your horse was injured, had applied continued applications of cold water instead of sharp liniments a restoration to a normal condition would probably have been effected long ago.

Actinomycosis—Lice on Colts.—A. G., Havana, N. D. Whether actinomycosis (so-called lump-jaw) can be cured depends a great deal upon the seat of the morbid process. If the latter is not in the bone, or in the tongue, or in the inaccessible organs, but in the subcutaneous connective tissue (just beneath the skin), a cure can in nearly all cases be effected.—It will be difficult to free your colts from lice in very cold weather. In warm weather a good wash, first with soap and warm water and then with a four or five per cent solution of creolin in warm water, the latter to be repeated in about five days, will dispose of the lice, but at the same time everything on or in which lice and nits may have found a hiding-place must be removed or be thoroughly cleaned, as circumstances will demand, and besides this the colts must receive sufficient quantities of nutritious food, particularly good oats.

A Great Eater and Poor Milker.—A. E. H., South Bay City, Mich. According to your statement I have a slight suspicion myself that you have been imposed upon. The fact alone that the cow was sold to you as a "Durham," a name at the present time very seldom used to signify a "Shorthorn," is very suspicious. Modern Shorthorns, it is true, are not bred for the pail, but for beef; therefore the fact that your cow is a poor milker would be no proof that she is not a Shorthorn, but if she is, her vigorous appetite would soon cause her to lay on flesh and to fatten. Show her to a Shorthorn breeder or to a recognized judge of Shorthorn cattle and he will soon tell you whether you have "a first-class scrub" or a genuine Shorthorn. There is nothing in your communication showing or indicating any disease. The ravenous appetite of your cow is a pretty reliable indication that she is not sick.

Discharges from the Nose—"Something Like Scratches"—Slavering.—J. F. McC., Normal, Ala. Discharges from the nose are an attendant not only of various diseases of the respiratory organs, but also of several morbid processes if situated in the maxillary and frontal sinuses and in other adjoining parts, for instance, the so-called air-sacs. It is, therefore, only a symptom common to several diseases, and may come from many different sources. Consequently, as long as the nature of the morbid process producing the same and the part or place of their origin is not known it is out of the question to prescribe for them.—If what you call "something like scratches" is what is commonly so denominated, a liberal application made twice a day to all the sores of a mixture of liquor plumbi subacetati, one part, and olive-oil, three parts, will speedily effect a cure. See answer under the head "So-called Scratches" in present issue.—Your mare which slavers nearly all the time and has a very offensive breath has probably a decaying molar. Examine her mouth, and if you find such a molar have it extracted.

So-called Scratches—Fatal Diarrhea of Calves.—C. F. R., Waitsfield, Vt. Make to the so-called scratches twice a day a liberal application of a mixture composed of liquor plumbi subacetati, one part, and oleum olivarium, three parts; keep your horse on a dry and clean floor, avoid any application of water and any contact with mud and manure, and the scratches will be brought to healing in a few days.—If your calves suffer from diarrhea immediately or within a day or two after they are born the fault is with the cows, or rather with the treatment the latter receive, and any medicinal treatment of the calves will be in vain. Give the cows during the last three months of gestation more exercise, allow them to go dry a reasonable length of time, say at least two months, do not feed them too heavily during the last two months with calf, and see to it that the stable in which they are kept is well ventilated, or in other words, receives at all times a sufficient supply of pure air, and you will experience no more trouble. If calves get diarrhea when six or seven days old the case is somewhat different. In such a case, too, it is decidedly advisable to feed less heavy food to the dam, and if this is done the following medicine: "Pulv. Opil, gr. X. Pulv. rad. rhei, gr. XXX, Magnes. carbonic. scrup. II, and Infus. flor. matricar. chaumouil., unc. VI," divided into two equal parts, one to be given to the calf in the morning and the other in the evening, or vice versa, will seldom fail to effect a speedy cure; but it will do no good if the calf is less than five days old when affected. In such cases in which it is too late for the precautionary measures mentioned above it is advisable to give the cow a physicking dose of sulphate of soda or of sulphate of magnesia a day or two before parturition.

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OUR SUNDAY AFTERNOON

I WILL NOT DOUBT

I will not doubt, though all my ships at sea Come drifting home with broken masts and sails; I will believe the Hand which never fails From seeming evil worketh good for me; And though I weep because those sails are tattered, Still will I cry, while my best hopes lie shattered, "I trust in Thee."

I will not doubt, though all my prayers return Unanswered from the still white realm above; I will believe it is an all-wise love Which has refused these things for which I yearn; And though at times I cannot keep from grieving, Yet the poor ardor of my fixed believing Undimmed shall burn.

I will not doubt, though sorrows fall like rain, And troubles swarm like bees about the hive; I will believe the heights for which I strive Are only reached by anguish and by pain; And though I groan and writhe beneath my crosses, I yet shall see through my severest losses The greater gain.

I will not doubt. Well anchored in this faith, Like some staunch ship my soul braves every gale.

Calm in this confidence it will not quail To breast the mighty unknown sea of death. E'en then I'll cry, though body parts with spirit, "I do not doubt," so listening worlds may hear it, With my last breath!

—The United Presbyterian.

TO-DAY

O heart, tired out with pain to-day, A thousand years to come Thy pain will all have passed away, Thy crying shall be dumb; As gaily bird-wings o'er the river Shall gleam with life that once was thine, As if this pulse, with pain a quiver, Still leaped with gladness half divine: To thee—to all—it is as one When once thy restless years are done. —Millicent Washburn Shinn.

THE DEMON OF DISCOURAGEMENT

A HINGE is a very small part of the door, yet it is a very important part; for on it turns the question whether the door be opened or shut. So the little word "but" is a very important hinge in that Bible text which tells us that "David was greatly distressed, but David encouraged himself in the Lord his God." On the hinge of that word turns a door of hope to God's people in the darkest hour of trouble. David was not the only good man who has been distressed; his experience has been a universal one. Our Heavenly Father has never promised to the best man or woman that their voyage of life shall be over smooth seas without a "capful" of head-winds. He so orders it that the precious things shall be costly things, and that the noblest life shall be one of conflicts, oppositions, trials, and often of severe discipline.

Observe that there is a mighty difference between being distressed and being discouraged. The king of Israel had good reason to be distressed; for a band of marauding Amalekites had attacked and burned down his town of Ziklag, and had carried off his wife Abigail as a captive. He goes right to God and asks what he shall do, and the prompt answer is to "pursue them." Whereupon he musters his gallant six hundred, pushes after the enemy and routs them, and recovers his wife and all his plundered goods. Disaster did not discourage him; it drove him to God. Such experiences in the Psalmist's life taught him to ring out the words of good cheer, "Why art thou cast down, O my soul? hope thou in God! Trust in the Lord and be of good courage, and he shall strengthen thy heart."

Just in proportion as any life is a thoroughly conscientious Christian life must it encounter enemies without and within. There is no lack of "Amalekites" in any track we may take, and some of them start up in our own hearts. Conversion does not end the battle with besetting sins; it rather intensifies the conflict. Paul might have had a more quiet time if he had let the old Adam have his way; instead of that he exclaims, "So fight I, not as one that beateth the air; but I keep my body under and bring it into subjection." One of the best men I ever knew has a constant fight with a naturally unruly temper, and there is more than one good woman who has hard work to restrain an unruly tongue. There is enough animal lust in the constitution of some Christians to keep them watching as travelers in Africa watch for tigers in the jungles. Pride is the besetting sin of Brother A—, and

love of popularity is the snare of Brother B—, and a pinching covetousness makes it no easy thing for Brother C— to open his purse wide when the collection-basket comes along. The Master's constant command is, "I say unto you all, watch!" The Christian who gives up fighting his Amalekites, and tries to find peace by surrendering to them, is disgraced in the sight of God; such discouragement means death to all healthy and happy religion.

We must encourage ourselves in God as David did; we must remember that it was his message we were uttering, and his children we were preaching to, and for his honor and glory. We were using his weapons, and he is responsible for results. All that you and I are responsible for is doing our whole duty. Ours is the seeding, and God alone beholds the end of what is sown. How do we know how much good we accomplish when we do any good thing, or utter any timely truth in love? Our measuring-lines do not reach into distant years—much less into the other world. Eternity may have many surprises for us. Wait and see.—Theodore L. Cuyler, D.D.

CHASTENING AS A TOKEN OF LOVE

It is hard to believe that love sometimes deliberately hurts its object; but it does. And the love that thus causes pain and sorrow is the very highest, purest type of love. It is divine love. It is such an intense and sincere love that it would rather inflict anguish than fail of doing its very best for the beloved one. It is too genuine, too strong, too clear-eyed not to put foremost the highest interest of its object. It will not spare him in mistaken and fatal kindness. It will cut to quick, doubtless aching with sympathy even as he aches with pain, rather than fail to remove, if possible, those traits which involve peril, if not ruin, to the character. When the Psalmist said, "It is good for me that I have been afflicted," he was not talking in caution. He had reached a point in his earthly career at which he could look back upon the preceding years and see them—much as God sees them—as a whole. He could appreciate the danger of the temptations which he had met, and the necessity of sharp warnings at this point and of actual scourgings of the soul at that point, in order to prevent his straying—or to rescue him, already strayed—from the way of safety. Such a retrospect of life is granted to each of us at times, and is full of instruction. It teaches us a tremendous truth—the need and use of unhappiness. It does not render distress agreeable. But it does draw the worst sting from grief by revealing it to be not the blow of a bludgeon in the grasp of a foe, but the lance in the hand of a wise and tender friend. Chastening widens experience, deepens sympathy, enlarges the range of friendship, invigorates character, throws the soul back upon God in firmer trust, and does a work for the soul so noble that, if its own character alone be regarded, the divine love behind it and pervading it becomes evident. Blessed are they who no longer need to be thus assured because their own hearts have learned the truth and rest upon it.

TEACHING CHILDREN APPLICATION

Set easy tasks for the little ones. Do not make them too long, but have it clearly understood that they are never to be left until they are completed. Even though the thing in hand occupies but five minutes, let nothing interrupt it. Completion should be the watchword, the inspiration, the beginning and the end of a child's duties. When this is once thoroughly wrought into the mind, subsequent teaching becomes easy and later lessons will lose their most formidable features. It is not altogether what we have to learn that is to be dreaded, but the undisciplined faculties which we bring to bear upon the undertaking.

A well-trained child should never know when its first lessons in application were taught him. The possibility of acquiring knowledge is nowhere better demonstrated than in the proficiency of the children of some of the crowned heads of Europe. At the ages of ten or twelve years they are able to speak several languages with the utmost fluency, are well grounded in all fundamental branches, read, write and speak correctly, and have a comprehensive idea of very many of the important facts of life.—New York Ledger.

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in clothes washed with the "BUSY BEE WASHER" 100 pieces in one hour and no hard work done. That is the record. AGENTS WANTED. Exclusive sale. Write for terms, Lake Erie Mfg. Co., 116 E. 13 St., Erie, Pa.

HIS LITTLE SWEETHEART

A TEACHER in a public school recently picked up on the school-grounds a small folded paper, which, upon examination, proved to be a genuine little billet-doux, written by a miss of nine to an admirer a year or so younger. There was nothing in the least degree objectionable in the note; it was simply a declaration of unalterable affection, a request that the recipient "answer soon," and the assurance that she was his "loving Dorothy."

The teacher had set her face firmly against this sort of thing. She summoned the pair to judgment in an august after-school interview, and with much persuasion and many tearful denials on their part wrung from the trembling little souls a confession of their correspondence, and also a promise of immediate and thorough reform. It was not the fact that writing of notes was a breach of rules, either, but the nature of the correspondence upon which she specially berated the culprits.

"We have determined to have absolutely nothing of this in the school," she said, speaking of it afterward. "The silly age comes of itself soon enough, even when it is nipped in the bud in such small children."

Then she quoted the story of a young girl just lately led astray, the victim of a man many years her senior, and who at school was addicted to writing love-letters, adding: "I blame the mothers in this for their laxness in teaching their children facts they ought to know."

The teacher was not unkindly, and she was undoubtedly honest at heart; but though she spoke a solemn truth in this last statement, surely there is another equally important lying beneath it, upon whose overlooking rests much unhappiness of later years.

The honest love of a true man and a true woman is the best and noblest earthly gift of a heavenly Father to his children, except, perhaps, that one which grows out of it and is a part of it, namely, the love of one's children: yet no other gift has ever been so misunderstood or abused or trampled in the mire. It is like a delicate vine springing up in the life and growing, developing, reaching out blindly for that other soul-growth which is its complement. What it needs for its perfecting is pure air, pure food and a wise and gentle hand for its training. And how often does it receive these?

The little boy and girl who play at keeping house with their doll-children, if they have outgrown their own baby-clothes, are so often the butt of ridicule to older children that it is rare to see such play; witness, too, the wrath called down upon the heads of the two small lovers whose trials are here recorded; the merciless chaffing and criticism a girl receives at the hands of her associates, nay, of her own father and mother sometimes, upon receiving her first visit from a gentleman; the unsparing and often rude jokes at the expense of a young man at his initial performance in "courtship." Small wonder that love and marriage are so frequently treated as a matter of scoffing and distrust, or that "marriage opens the eyes," when so many influences have combined, since early childhood, to put the relation, and those who assume it, alike in a false and unnatural light.

Now, for remedy, let us begin at the beginning.

When the small man comes telling his mother about his little sweetheart—her personal charms, her goodness, her preference for him—let his confidences be met with honest sympathy. If he comes in tears because she has slighted him or been coaxed away against her wishes, then give him tender comforting; it is not in the least funny to him. Who has forgotten the hundred little hurts and delights of his own childish experiences? They are not trivial, as they seem, but very real, and the effects of them in after years are often far-reaching. Says Whittier, in "Memories:"

Yet hath thy spirit left on me
An impression Time has worn not out,
And something of myself in thee,
A shadow from the past. I see,
Lingering even yet thy way about.
Not wholly can the heart unlearn
That lesson of its better hours;
Not yet hath Time's dull footstep worn
To common dust that path of flowers.

Or his beautiful "In School Days," than which no sweeter word-picture of child-love was ever drawn.

As for unfortunate attachments of young people, three fourths of them would die a natural death if the pure light of free and friendly intercourse were let upon them.

The little heart, like the little vine, reaches out blindly, the germ of home-love and husband-love or wife-love, needing the wisest care. Let it grow naturally into loving and being loved, unhampered by fear of unkindly criticism; and, above all, do not call it the "silly age" or ridicule it. Here is laid or destroyed the foundation of that perfect trust, which, by and by, when the real love comes to your child, will be a mighty power in your hands to help him choose wisely and well.

The teacher was not alone, either, in her nervous fear that vice and impurity might creep in through the door at the same time with the innocent child-love, and in her anxiety she sought to crush the possibility of evil, even at the expense of the good—a frantic effort to do something—because the real remedy seemed to lie in other hands than her own. It is the mother who should early teach her children, reverently but truthfully, the laws of life, the sacredness of fatherhood and motherhood. A boy or girl who is old enough to talk of a sweetheart is old enough to learn, in some degree, the meaning and the holiness of the tie which unites those "whom God hath joined together." A child who begins to doubt the truth of the statement that "doctor brought little brother in his black medicine-case"—a most unforgivable statement in the beginning—is old enough to know something of the sacred mystery of birth.

And knowledge, which destroys curiosity, disarms vice of its most potent weapon.

There is another power, also, in possessing a child's confidence in childish matters which may have great influence for his good. When he comes with shining eyes and flushed cheeks, telling that he "loves Dorothy and she loves him, and that by and by they will be married and live together in a nice house like you and papa," it is the wise mother who answers, smilingly:

"Ah! That will be nice! Now I shall love Dorothy very much, and for her sake I shall do all I can to help her little husband to be a good man, who is thoughtful and kind and neat and pleasant."

So, as the little fellow hangs away his coat and brushes his hair, and helps set the tea-table or amuses baby, he basks not only in the sunshine of loving sympathy, but in the blessed, half-understood consciousness that he is taking an upward stride toward a lofty ideal that will some day make happy and contented a real Dorothy, and add also an item of incomputable value to the true and noble citizenship of the world.

HATTIE PRESTON RIDER.

THE SCHOOL-GIRL'S DRESS

Mrs. B—"How do you manage, Mrs. A, to keep your flock of girls so nicely dressed? I declare I never saw one of the whole five of them the least bit out of order, while my two girls nearly worry the life out of me about what they shall wear, and are never suited, and for the matter of that, neither am I. Doesn't it take a great deal of work and care?"

Mrs. A—"Why, I had not thought of it. Perhaps it does require eternal vigilance, but that becomes a habit by practice. I can tell you how I managed the past winter; it may give the solution. I try to improve on my methods each year, in order to keep expenses within my income. Early in the fall I bought enough all-wool navy-blue serge, of best quality, for the 'whole five.' By purchasing such a quantity I got quite a reduction in price, and as they are each in a different school-room they do not appear in uniform, as one might suppose. Esther is past sixteen, and as she is in the senior class in the university, and will graduate in music besides, she will be quite conspicuous, so her dress was given

most thought. I buy patterns of the fashion that I think most lasting and becoming, paying no attention to the latest novelties, permit the girls to dictate as far as practicable, hire a good sewing-woman, not an expert dressmaker, for I wish each of us to learn as much as possible by oversight and helping. Esther's was trimmed with silk ruffles of dark scarlet or garnet color at neck, wrists, epaulets and side fastening. Jeanne and Bessie, aged fifteen and thirteen, had theirs made much alike, with yokes and cuffs of fancy plaid velvet and butter-colored lace ruchings. Alice, past eleven, wished hers to be trimmed with dark-blue velvet and fine gilt soutache braid. She is the proud possessor of a gold chatelaine watch, a namesake gift, and thinks that is all the ornament she needs. She really showed excellent taste for one so young, for the suit is most becoming, as she is very fair,

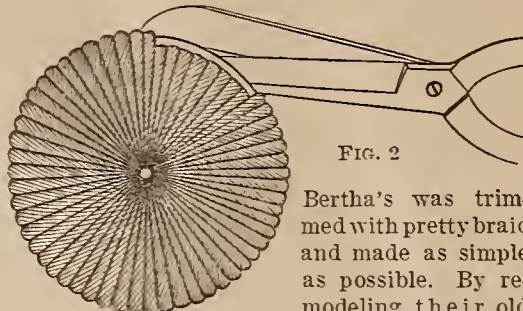


FIG. 2

Bertha's was trimmed with pretty braid and made as simple as possible. By remodeling their old

dresses after the new suits are finished they usually manage to get up two presentable suits apiece, which do good service for school wear and on rainy days. They wear the new only for best till holidays. When attending church or elsewhere where they keep on their coats. I think it a great saving to wear an old waist instead of the much-trimmed bodice. By doing so they keep their suits trim enough for Easter, with perhaps a few extra touches. Each takes sole charge of her clothes after they are made except Bertha, and she is taught to mend most of her garments. Their best clothes are changed at once on returning from school or church, and carefully put away. They wear large bib-aprons to protect their dresses while eating, as all come home for noon lunch. I have found by experience that it does not pay to buy cheap goods. I like a good serge, as it is very wide and cuts to better advantage, both sides being alike. One year I haunted the remnant counters, and no two of them had dresses alike that year. Esther's cost one dollar a yard, but it lasted for three years' hard wear as a dress, and is doing good service as a skirt for Bessie now. I like to have all sewing done early in the fall, so the girls need have nothing to divert their attention from their studies, and, indeed, they seldom mention dress, either their own or others. Then the older ones are furnished with a good supply of serviceable shirt-waists for early fall and late spring warm weather, and a nice one, each made of the dress linens that so closely resemble silk."

VESTA C. TURNER.

CARD PARTIES

There is no form of entertainment so popular as a card party, and none easier to give, for the hostess is relieved of much entertaining, the guests amusing themselves. This form of amusement has held a foremost place for many years, although it has been severely condemned, because of the abuse of cards.

Whist-playing has been the fad recently, but progressive euchre has lost none of its charms. Unless a person has a large house, and can give each table of whist-players a separate room, it is better to have such games as hearts or six-handed euchre.

In sending out invitations to a card party the word "cards" should be written on them. Do not invite persons who for any reason do not play, as it will be embarrassing to both hostess and guests, and therefore you cannot make your entertainment a success.

As the guests arrive they lay off their wraps and are ushered to seats at the little tables—everything having been arranged. The young ladies selected to punch (if it is progressive euchre) pin your colors with the number of table. Gloves should never be worn, as one cannot deal or shuffle properly.

Simple refreshments are usually served, and at a stated time the bell taps announcing lunch. The game has to run its course—say fourteen or sixteen games. When the game closes those seated at the same table eat their lunch together.

It is considered in better taste to have inexpensive prizes. Some people play altogether to win, irrespective of others' feelings, and sometimes resort to dishonest methods to accomplish their aim. This is especially the case where a very elegant prize is to be given, therefore something simple and of trifling value will create a more friendly rivalry and less hard feeling. A lady should make up her mind to curb any hostile feeling, remembering that she is noble and obliging, and must not sacrifice herself.

At watering-places and in suburban homes where a number of families sojourn for the summer, progressive euchre was the favorite amusement; and the winter entertainments are mostly euchre. From two o'clock until six is the most suitable time to have a card party to which only women are invited; but if both men and women are invited, it is best to have the hours between eight and eleven o'clock. Men as a rule cannot get away from business in the afternoon. Then, too, in the evening the women are expected to wear some pretty evening costume (not full dress) and leave off their bonnets; whereas, at afternoon parties they wear tailor-made suits or street dresses and keep on their bonnets. The men also dress more, though a dress-suit is not required.

An invitation to a card party demands a prompt and definite reply; and if you do not feel positive that you will be able to attend, you should not accept. Failure on the part of any guest to attend after accepting an invitation makes it quite embarrassing for the hostess, she finding it necessary at the last moment to get some one else to fill the place of the absentee. Guests should also be prompt in arriving at the home of the hostess, and be in their places and ready to play when the bell sounds.

The choice of prize-winners should be accepted with pleasant courtesy by all the



FIG. 4

guests. We should play for the pleasure and recreation, not for the sake of winning prizes. With charming society and appropriate refreshments one should be entertained and feel that he has received sufficient compensation even if he does not win a prize. All cannot win, and the hostess should not be made to feel that any of her guests were disappointed. If these rules are carried out your card party will be a success.

SARA H. HENTON.

HOME-MADE BALLS OR POMPONS

Cut from a piece of cardboard (or an old postal-card) two disks of suitable size. Cut a circular hole in the center of each, and place them together. Draw a silk or wool thread in and around these disks from the center to the edge, covering the entire surface (see Fig. 1). If the thread used is thin, repeat this once or twice. Pass the point of the scissors in between the two cardboard disks, and cut the thread at the edge, as Fig. 2 shows. The only thing now remaining is to carry some strong thread around the center of the ball, where it is fastened (see Fig. 3) in a tight knot and the ends removed. Another clip with the scissors does away with the cardboard disks, whereupon the ball is rounded off and rolled lightly between the hands until presenting the appearance shown in Fig. 4.

J. CHRISTIAN BAY.

A REMEDY FOR MOIST HANDS

For the benefit of those who are troubled with moist hands while making tatting or working with light silks I would give this hint: Wash the hands in as hot water as can be borne. A dressmaker told me of this, and I have always found it good.

Mrs. D. D.

THEY CALL TO ME DAY AND NIGHT

BY GAZELLE STEVENS SHARP

About me I see noble women,
Alive to humanity's needs,
Whose hearts are in touch with all nature,
Whose lives overflow with good deeds;
With leisure to follow love's promptings,
To help make some other's path bright;
I have only my little children
Who call to me day and night.

Then I think me of how many women
Have never a baby to hold;
Who through the swift flight of the seasons
Watch no tiny blossom unfold;
Whose homes, howsoever grand and costly,
No dear childish faces make bright;
To whom never comes the sweet music
Of voices that call day and night.

And I think of the sorrowing mothers
Whose birds from the home nest have flown,
Flitted back through the portals of heaven,
While they linger sadly alone;
Whose homes, now so empty and quiet,
Were once filled with laughter and light;
No more will those sweet baby voices
Respond, though they call day and night.

I think, too, of others whose dear ones
A fond mother's guidance have left,
Estranged by new scenes and companions
From her, thus so sadly bereft;
Though she, as of yore, yearns to greet them,
No response comes her love to requite,
While I—thank God I have my children,
And they call to me day and night.

THE KITCHEN CLUB—A PIE CONVENTION

Oh, my! we oughtn't to come on a baking-day, ought we?" Miss Tildy, seeing a string of pies on the window-sill, was about to flit off again, black sunbonnet and all.

"It isn't baking-day," Dorinda assured her, as she hauled a gem-pan full of jolly little tartlets, all bulged up with clear, red gooseberry jam, out of the oven; "it is only one of my picked-up-pie days."

"One of your what?" Miss Tildy asked, doubtfully.

"Picked-up-pie days, I call them. When left-over things accumulate, a little dab of this and a little of that, I set to work and bake a few pies to use them up; and it is perfectly surprising the things George and the children will eat when they are made into pies that they won't touch any other way. A few spoonfuls of gooseberry jam or preserved raspberries or cherries are left in the bottom of the jars, or half a bowl of apple or peach butter or cranberry sauce, all perfectly clean, but the family sniffs at them because they are only dabs, and wouldn't be bribed to eat them. But let me gather them up, make some nice crust and convert the odds and ends into frilly-looking pies with delicate crust latticework on top, and a pauful or two of plump little tarts, and behold, they will devour the whole outfit with alacrity."

"That's just Jim." Mrs. Tinkham had trotted in in the meantime, and was perched comfortably on a corner of the sink. "That man would eat cold boiled cabbage if I put it in a pie. He was born with a hankering for pie. I got up a lovely scheme once, to give him a surfeit so he wouldn't be eternally pestering me to make pie, in season and out of season, and I went into the pie business for all I was worth. He says he doesn't care especially for any kind of pie except mince and pumpkin and apple and peach and berry and grape and lemon and custard and rhubarb and tomato, and a few other kinds. I tried to make them all, and I had pie for breakfast and dinner and supper. I made round pies and square pies, fried pies and turn-overs, scalloped pies and plain pies, and the more I made the more he expected, until I got clean tired out and quit in despair, and haven't made one since; and when the last piece was gone he grumbled and wanted to know if there wasn't a scrap of pie anywhere about the premises, and asked why we couldn't have some pie once in a while."

"I wonder he's alive," reflected Miss Tildy; "pies are about the most deadly thing made. I suppose Peggy's were reeking with grease."

"I suppose they weren't," bristled Peggy. "Why, when I ran short of lard I didn't shorten the under crust at all, only greased the pan, and made the upper crust good and short, and Jim never knew the difference."

"I don't go much on lard," said Dorinda; "I believe that is what makes pastry unwholesome. I prefer butter, and good butter, too. I don't suppose at best pies are especially wholesome for a steady diet, but I find that

"A little pielet now and then
Is relished by the wisest men.

"But it wants to be made just right, and be

crisp and brown, or it is no earthly good. A greasy pie, half baked, with a thick, pale upper crust and a soggy under crust is enough to give a pig the nightmare (not meaning to say that's the kind Peggy inflicted on Jim). Now, you take and sift your flour nicely, with a spoonful of baking-powder in it, work your butter thoroughly but lightly through the flour, then add cold water, a little at a time; be careful not to get the dough too wet, so as to have to put more flour in it, but have it soft enough to roll easily; roll your crust thin, and bake the pies all through, good and brown—and, by the way, I think a perforated tin pie-pan is the best kind to bake in—and they wouldn't hurt a mouse, provided it didn't try to live on pie."

"Just so," said Peggy. "I believe I'll bake one for supper to-night. If anything should happen to Jim it would always be on my conscience that I hadn't given him enough pie."

"I don't think you'd die of remorse, if that's the worst you ever did to him," said Dorinda; "and I don't suppose you really ever did worse than give him coffee boiled on the old grounds. But don't you bother making pie to-night; take one of mine along; and Miss Tildy can have one, too. I've got oceans more than I need; I had so much good material on hand to use up, and they're warranted not to kill; so both of you take your pick."

I don't know how Miss Tildy disposed of her scruples, but I noticed that a comfortable-looking, juicy cranberry pie with an open top and crimped edges accompanied her when she left, while a portly brown double-crust pie went with Peggy Tinkham.

PRISCILLA PIPER.

A SIMPLE DEVICE

A simple device for the curler is shown in the accompanying illustrations. It is for the purpose of keeping the iron from falling in a chimney that is too large to allow the base of the handles to rest properly on the top of the lamp-chimney.

To make it, procure a brass ring about one half an inch in diameter—not over three fourths of an inch at the largest—three strong wire hair-pins of the regular size, and some fine wire. Invisible wire hair-pins will do for the fine wire if you have nothing else handy. Now fasten the ring to the pins, or rather the pins to the ring, in the manner shown in Fig. 1, twisting the fine wire about both ring and pin where they come in contact. This done, bend each of the pins at a right angle from its upper part,

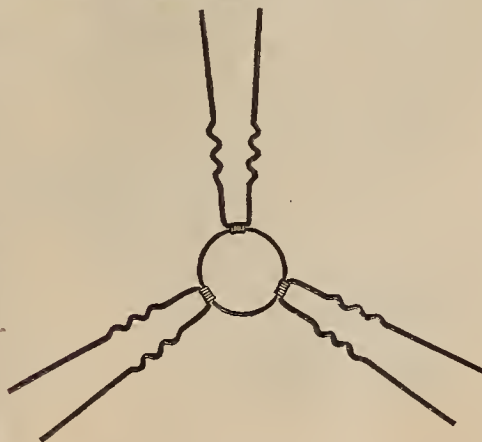


FIG. 1

making the bend just below the curves, as shown in the pins in the illustration, or about one third of the distance from the end of the pins.

Place in the top of the chimney as shown, resting over the edge of chimney the hooks formed by bending the pins. This will keep the holder from slipping about. Thrust the curling-iron through the ring, and it will heat evenly, and with no danger of burning the handles.

This will fit any chimney. It is a very convenient little article, and will well repay any one for the few moments spent in the making. It is fully as good as the ones sold in the stores at ten cents each, is simpler, and will fold up into a very small compass when not in use.

MAY MYRTLE COOK.

TO MOTHERS

Never let your child think for an instant it was anything but a gift—a gift of sunshine from the hand above.

Recently in a letter from a lovely lady there was reference to her son in these words:

"Our dear son, who has been nothing but a pleasure all his life, is now at Harvard studying law."

I happened to meet this son, and found him all a fond mother's heart could desire—studious, intelligent, religious and manly.

In course of conversation one night this young man remarked, "I am glad I have had the home training I had."

I also once heard a mother praise a little girl in the child's presence. She said, "Effie is such a good child, has always been good, and I attribute some of this and her gentle manners to the fact that I never had a nurse for her; I have always kept her near me." This little girl was invited out the day before Christmas, and asked to remain over Christmas day, but the child cried when leaving home, and said, "Mother, I want to come back to-night; I can't bear to think of being away from home Christmas day."

With parents and children it is a game of shuttlecock and battledore. Send out love, sound principles and good examples and you will most surely receive the same.

Parents, do all of you realize your stupendous responsibility?

Read again old Æsop's fable, "The Crab and Her Mother:"

"Said an old crab to a young one, 'Why do you walk so crooked, child? Walk straight!'

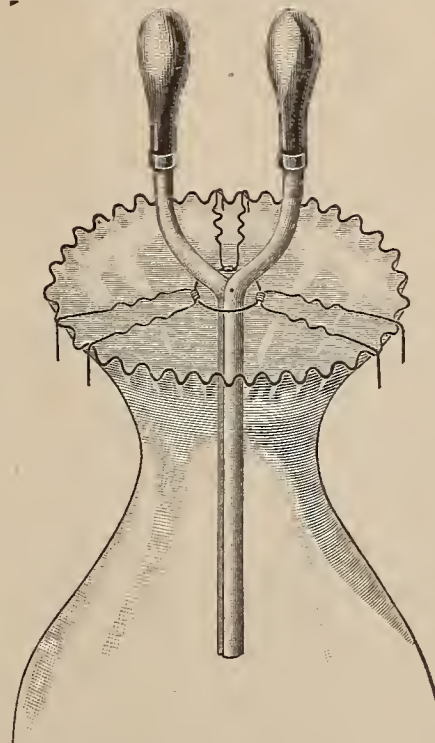


FIG. 2

"'Mother,' said the young crab, 'show me the way, will you? And when I see you taking a straight course I will try and follow.'"

Make the homes bright and happy for your children, teach them games and cultivate early their tastes for hearing stories of real characters; and when they are older make an effort, though your means be very limited, to give them pure, sound literature. Open their eyes to the pathos in life, and even though they be boys it is no discredit to say of any man, "He is as tender and sympathetic as a woman." Remember their birthdays with a gift, a little outing, or by entertaining some of their friends.

The routine of all this may be a life-work, but who knows but it may be a grand work, and your influence will go sounding down the ages until time is lost in eternity?

P. H.

SHE THAT HATH EARS TO HEAR, LET HER HEAR;

Are you considering the question of papering your rooms? Consider well. Let the artistic influence your decision. Don't get a light paper because it is cheap. Don't select a dark paper because it will not show dirt. Don't get a paper expecting it to do duty for the next fifteen years.

You may possibly find a paper that is artistic, excellent and cheap. Again, you may not. One of the prettiest rooms that I ever saw was covered with paper that only cost twelve and one half cents a roll. The background was a warm, rich buff covered with clusters of tan-colored clover-heads and olive-green foliage. The ceiling was in delicate buff, pink and blue. The wood-work was in olive-green. The effect was esthetic.

One of the best papers is the ingrain. Your dealer will tell you that it is out of vogue, but it isn't. A handsome room lately done was of greenish gray ingrain. There was a deep border of pale pink roses festooned and caught with pink ribbon bows, and this border was trimmed out. The idea is decidedly bold and very startling, but if you venture to have your border trimmed you will be very much pleased.

The picture-molding must, in this case, be set above the border, and should be heavy and rich.

Ingrain paper cannot be pasted over old paper, and is never put on so that it laps, the selvage being cut off and the two edges being drawn exactly together. A sharp pen-

knife should be employed in trimming out the border and in cutting off the selvage. Cut the selvage by a heavy ruler.

Ingrain comes only in artistic shades, so there is no danger of making a mistake in selecting any of its patterns.

Another lovely way to treat a room is to alabastrine it. This is nice for a room in rough plaster, but is especially pleasing in rooms of smooth finish.

The alabastrine comes in fifty-cent boxes. Two of these boxes will tint an ordinary room, and you can do the work yourself if you will rigidly adhere to the directions on the box.

There must not be a vestige of old paper on the walls. That is the only requirement. You can remove old paper without much labor if you will thoroughly spray the walls and ceiling. An ordinary fruit-sprayer is the most satisfactory article to use. If you cannot get that, put your gasoline-stove in the room, put a boiler of water on, and saturate the walls with steam. The paper will then easily peel off.

When buying your alabastrine better purchase all of it at one time, as you are liable to lose the number, make a mistake and get different tints if you buy at different times.

Pale pink, pale green, light tan or rich buff are all good shades. One shade, say pale green, for the walls (it is a delicate apple-green) and light pink for the ceiling.

With alabastrine it will be necessary to use a stencil border pattern. Cream with gilt or some pretty contrasting shade gives a fine border. Or if there is a genuine artist in the family, the artist might paint a border of roses, ribbons and foliage.

By all means finish your room with a picture-molding, if it is only oak.

If the kitchen has no base-board or wainscoting, the best way to do is to get oil-cloth in some subdued tone and pattern pasted entirely around the room. Finish it at the top with a narrow molding. This can be washed, and receives without impression all the hard knocks to which a kitchen wall usually falls heir.

MARGARET M. MOORE.

DAPHNIS

Ere the spring comes, we will go
Where belated lines of snow
Lie in wreathlets chilly bright
Round the wind-flowers pink and white,
Trembling even as you, my own,
In my arms about you thrown;
Where pale sheets of ice like glass
Fleck the marshland's greening grass;
Where beneath the budding trees
Dead leaves wait for April's breeze—
Chloe, Chloe, we will wander
Hither, thither, here and yonder.
Seeing you, the jealous spring
Sure will haste a laggard wing,
Though the upland plains are snowy,
Though the snow is on the plain—
Chloe, Chloe, Chloe, Chloe.
But she answers not again.

Chloe, lo, the spring is here,
All the wintry walks are clear;
Prismy purple is the air
Round the branches brown and bare;
Purple are the doubtful dyes
Of the clouds in April's skies—
Come, and make last summer stretch
Over half a year, and fetch
Smells of rose and violet
In the barren ways to set.
See, the wood remembering misses
Sweetness of our last year's kisses.
O'er the place where once we kissed
Falls a veil of rainy mist—
Tangled rain-sheets, wreathed and blowy—
There is weeping in the rain—
Chloe, Chloe, Chloe, Chloe.
Ah, she answers not again.

—H. C. Bunner

AN ATTIC BEDROOM

Another bedroom we must have, and there was only the attic room. It was six feet high at one side, arched overhead, and the other side slanted down to four feet. It was ten by twelve, and had a full-sized window at one end and a closet and chimney at the other. The walls were plain white hard finish, and we did not care to paper them, although they looked cold and bare. We compromised the matter by putting on a nine-inch border of delicate pink and gold.

This made another room of it. As the room was to be occupied by "the girl" a single bed would do, so a spring cot that was extra wide was purchased, together with a good wool mattress. A cover was made to fit over the cot and mattress and hang to the floor, and so form a pretty couch during the day. The cover was made of olive-green denim, corded and bound with pink. Two cases for the pillows were made from the same goods, with ruffles entirely around them. One of them had a crocheted tidy of

[CONCLUDED ON PAGE 12]

pink cotton fastened to the top of the cover. In the morning, after the bed was aired, it was made up, the pillows slipped into the cases, and the cover pulled into place, and a comfortable couch was the result. The floor was covered with cream and green matting, with a rug in front of the couch and wash-stand.

A wash-stand with three drawers and made of oak was added, together with a plain white chamber-set. A dressing-table was made out of a suitable box, furnished with shelves, and covered with the denim. A fine white, bordered towel was spread over the top, and a mirror hung above it.

The wash-stand had a splasher of white oil-cloth painted with wild roses, and a spread for the top of the same material, painted at the ends. A common kitchen chair had three inches cut from the legs, and was furnished with a head-rest and cushion of the denim. The head-rest was tied into place with pink bows. A soap-box had casters added, the top padded with old carpet, and the whole covered with denim. This served for shoes and rubbers.

The kitchen chimney being at one end the room was always comfortable, or in very cold weather, evenings and mornings a coal-oil heater furnished heat.

"The girl" thinks there never was such a room, and she takes pride in adding to its furnishings. One article that she has made is worth mentioning; it is a set of bookshelves. She procured four boards at the store—that had dress-goods wrapped around them—a few yards of heavy picture-cord, and a box of olive-green paint. A hole was burred at each corner of the boards with a large wire nail. The cord was cut into two pieces, long enough to reach from the ceiling to the bottom of the shelves double. These were put through the shelves, with spools strung between, to make the shelves the proper distance apart. When finished it was given two coats of paint, and the spools touched up with gold paint. Two strong picture-nails were used to hang it by from the ceiling.

She has also made a cute little table from spools strung on heavy wire, and two sizes of wooden pail-covers. The smaller one forms a shelf half way down, and the larger one the top. As the spools are strung upon the wire glue is put between them. The table is firm and steady—which is more than could be said of a table I once made from three broom-handles and a firkin top. The shelves are covered with the denim, and green and pink linen fringe is tacked around the edge with gilt-headed tacks.

MAY LONARD.

A CHAPTER ON CORN-MEAL

CORN MUFFINS.—Any corn-meal mixture we call batter and not "dough." As soon as the fire is made put in the muffin-rings (preferably of iron) to get hot. To fill two sets of rings, six in each, sift a pint of meal with a teaspoonful of salt. Stir a teaspoonful of soda into one and one fourth pints of buttermilk until the soda is dissolved and the buttermilk frothy; then pour this into the meal, and mix. This will make a thin batter. When the muffin-rings are hot enough to make the grease "sizzle" put about one fourth of a teaspoonful of grease in each mold. Break an egg into the batter, and stir thoroughly just before putting the batter into the mold. Drop the batter with a large spoon, being careful to dip from the bottom, as the meal settles. It is better to bake muffins on the upper rack of the stove. When baked, turn them out of the rings at once, as they "sweat" and get clammy.

CORN-PONES OR CORN-DODGERS.—These are made by pouring slowly, and mixing as you pour, a pint of hot water over a pint of meal into which a teaspoonful of salt has been sifted. A tablespoonful of melted lard may be added or not as one prefers. The mixture is then molded in the hands into small, oblong rolls, and these are put as they are molded into a skillet or griddle. The negro aunties used to press them down rather flat and thin, leaving the prints of the fingers on them. This makes them cook sooner and they are more "crusty." There should be a hot fire, and the pones should be left in the oven until well browned. Some may prefer to mix the meal with cold water or milk, or milk and water mixed. The hot water has the advantage of partially cooking the meal and of bringing out a deal of nutty flavor.

GRIDDLE-CAKE.—This is made in the same way by pouring a pint of hot water over a pint of sifted meal and salt, but the mixture is scraped in a mass into a cold griddle, and mashed flat and smooth and thin until it covers the griddle. The tablespoonful of melted lard may or may not be

put into the mixture as one prefers. Griddle-cake should be baked in the oven until dry and crisp.

SPOON-BREAD is muffin batter baked and served in a galvanized-iron pan, heavy porcelain or porcelain-ware. The batter when put in the pan should stand one or one and one fourth inches deep. It should bake until brown and separating from the edges of the pan. Cooked in this way it has a somewhat different taste from muffins. It is sometimes more convenient to bake the batter in this way, as the pan takes less room in the oven than the muffin-rings. Unless baked too dry it is soft enough to be taken out with a spoon, and served in this way; hence, "spoon-bread." Some call it meal-pudding. The tablespoonful of lard is a matter of preference in every case.

Meal should not be gotten in large quantities, and it should be kept in a dry place; otherwise it gets moldy. Any of these corn-breads eaten with plenty of butter are dear to the gastronomic heart of Kentuckians.

KENTUCKIAN.

A FEW GOOD RECEIPTS

PIE.—The geographical limits within which "perpetual pie" holds undisputed sway were once more clearly defined by Charles Dudley Warner, and there is no reason to suppose they have since been extended; however, when the following formula for pie manufacture shall be thoroughly known and tested we may reasonably expect a rapid increase of pie territory.

Bake an under crust of pastry, which, when taken from the oven, fill with stewed prunes, previously stoned. Sweeten the prunes while stewing, and to the juice (there should be nearly a cupful) add one teacupful of cream in which has been dissolved one tablespoonful of corn-starch. Put the mixture over the fire, and stir constantly until it thickens, adding sugar to taste should the prune-juice be not sufficiently sweet; then pour this over the prunes in the pie-dish. Have ready the stiffly beaten whites of two eggs into which has been stirred two tablespoonfuls of pulverized sugar; spread this upon the pie, and place in oven until browned.

SNOW-CAKE.—Three cupfuls of flour, two cupfuls of granulated sugar, one half cupful of butter, three fourths of a cupful of milk, the whites of eight eggs and two and one fourth teaspoonfuls of baking-powder. Flavor with extract of bitter almonds. In measuring the sugar let the cupful lack one half inch of the top. Stir together the butter and sugar until the mixture seems to break and is almost white. Sift the baking-powder into the flour, previously sifted, then put all through the sieve again. Add in alternation and little by little the milk, beaten whites and flour. Now beat for fifteen minutes. After the cake has been in the oven five minutes open the door for three minutes; then close it, and at the end of five minutes again open the door for two or three minutes, after which the cake may be allowed to remain with the door closed until baked. Use boiled icing flavored with lemon-juice. This is more delicate than angel-cake if properly made.

"Mrs. Barton's" **SALLY-LUNN.**—Three pints of bread-dough, one egg, one tablespoonful of white sugar, salt, and bake in pie-tins. Serve hot, the cakes to be split apart and buttered.

L. W.

TO "THE SUFFERIN' NEAT"

BY J. M. M.

There was a little woman
In very sorry plight;
For, strange to tell, this woman
Disliked to dwell with light.

She closed her blinds up tightly,
Then draped the windows o'er,
For fear the blessed sunshine
Would spoil her walls and floor.

This dainty little woman
Grew very pale and thin,
Just like the weak potato-sprouts
In cellars deep and dim.

Ah, silly little woman!
You have faded out of sight,
Because you would not let in
The sweetness of God's light.

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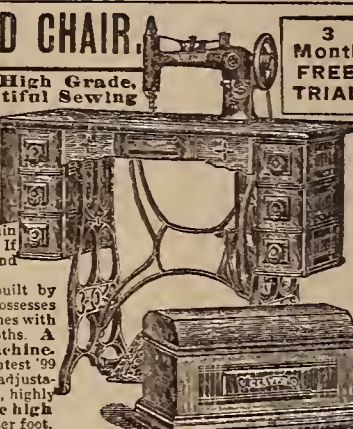
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A GIRL FARMER

By Annie M. Burke

CHAPTER VI.

WHEN Mollie got home from the barn-raising that day she was frightened at herself. What had she been thinking of? What had she consented to do? Had she actually agreed to consider the question of getting married?—she, Mollie Gordon, who had always been seen as plainly as daylight that marriage was out of the question for her!

"I must have been crazy," she said to herself. "It's because of the way he talks to me. I never can see things right when he's with me, looking at me and smiling so. But I can see them right now! I mustn't get married! I can't think of it—not for a moment! I won't! I won't!"

She decided thus immediately when she got home from the barn-raising that day. She was separated from Joey now. He was not here to smile, to make her look at him, and to persuade and plead. She could see plainly now.

So this was Mollie's decision. This was the way she fulfilled her agreement to "think it over till the end of the week;" this was the way she gave Joey the "very best chance she could" in her thoughts. But she had a hard week of it—a very hard week. The barn-raising was on Tuesday. On Thursday she told herself she could not endure it so long as till Saturday evening.

"I can't wait till the end of the week to give him my answer," she said. "I don't care if I did agree to think it over till Saturday night. I can't stand it on my mind so long! I can't! I'm going to give him my answer right now! I must have it off my mind!"

So she wrote him a note. It was as follows:

"DEAR JOEY:—I can't agree to what you wanted at the barn-raising that day. I can't possibly. I mustn't think of it for a second. There's no use in telling why. You'd just go to arguing and persuading if I told you my reason, and I can't talk with you about it any more. I know I agreed to wait till Saturday night to give you my answer, but I couldn't have it on my mind so long. This is all. I'm sorry it has to be this way. You mustn't come here any more. Good-by.

"MOLLIE."

Mr. Hudson was visiting Aunt Kate that afternoon, and when he was going away Mollie gave him the note to give to Joey, his home being near the Madison's. It was just twenty-five minutes to four when the old gentleman started away with the note, and it was just twenty minutes after four when Joey came walking into Mollie's sitting-room. He was smiling audaciously.

"Whatever possessed you to send me that brutal note, Mollie?" he wanted to know, by way of greeting. "It's a shame! I don't know what to think of you!"

There may have been anxiety in his heart, but it did not show in his bright face. He wore the common working-clothes which he had on when Mr. Hudson gave him the note. These consisted of overalls, dark shirt and plow-shoes, and the big straw hat which he now carried in his hand. He made no mistake in coming this way to see Mollie. She approved of working-clothes. Then Joey was a gentleman in any garments.

Mollie tried to be firm. She told him it was no use, positively at first, but she would not look at him. Looking at Joey was fatal to resolutions. However, Joey would not be thrown over. He would not be refused. He believed Mollie liked him a little, and he took advantage of this. He would not take her answers till they were such as were agreeable to him. And he won his way. Before he left the house that day Mollie had come back to her old agreement to think it over till Saturday evening, when he would come to get his answer. She also agreed over again to "give him the very best chance she could" in her thinking. Then Joey went away.

Saturday evening came. Mollie did the chores early, then went into the house and sat down by a front window to wait. About the time she expected them a beautiful matched team and a fine buggy came up to the hitching-post. Within the buggy was an elegantly dressed young man. Joey did not often do anything to remind people that he was a great deal richer than any one else in the neighborhood, but his turnout to-night showed it.

The moment Mollie saw him she jumped up and went over to the bay-window where her grandfather sat. Her face was white, and her eyes big and frightened.

"Grandfather," she said, "there is Joey Madison out there! I want you to tell him I'm not at home. I'm going out the back door just now, and over to Uncle Graham's across the fields. I want you to say something to Joey to make him never come here again. I can't see him. Will you, grandfather? Say anything—I don't care what; just so you send him away forever! Will you, grandfather?"

The old man hesitated. Joey was a civil fellow, he said. The boy always had a pleasant word even for a useless old man. He didn't like to give him such a message.

Mollie became fierce. "You must tell him, grandfather!" she cried. "I'm going now. Prom-

ise you'll say something or other to him to stop him of ever coming after me again, grandfather!"

The old man reluctantly consented. Mollie hurried out of the back door. She really had meant to go to her Uncle Graham's across the fields, but by the time she had got half way across her own corn-field she felt weak and tired, and her limbs were trembling. So she sat down in the thick wilderness of corn to rest. Here she spent the evening, sitting on the ground with her face on her knees, and with the wind softly rustling the tall corn above and around her.

In the meantime her grandfather was having a hard time giving her message to Joey. He hesitated woefully at first. He did not know what to say to this boy to make him never come back. Then at last he told him just what Mollie had said to him—"that he was to tell Joey Madison something or other to make him stay away forever," and so forth.

Joey was silent a long time when he heard this. The old man was afraid to look at him. Outside the window they could hear Little Maggie talking to a spider she had found; farther out in the barnyard a rooster crowed discordantly, and a young colt whinnied. Still Joey did not speak. The old man moved uneasily on his chair. Then at last Joey got up, and held out his hand.



SHE SAT DOWN IN THE THICK WILDERNESS OF CORN TO REST

"It's all right, sir," he said, bravely. "I understand. I'll not come again!"

Mr. Gordon arose nusteadily, and held out his hand. "I'm sorry, my boy," he said. "I'm sorry it's this way. If I could—"

"Oh, it's all right; it's all right, sir," said Joey, firmly, though his lips were white. "You tell her I'll not come again. Tell her she needn't be afraid! I understand!"

He maintained his show of firmness till he left the house, but the old man, watching him go down the path, thought he would never reach the gate. Joey was not perfectly strong as yet, and he walked unsteadily; but he did reach the gate, and climbed into his buggy.

It was about nine o'clock when Mollie came back to the house that night. Her face was pale, her eyes looked big and linnions, and her lips were apart as if she found difficulty in breathing. When every one else had gone to bed she sought her grandfather.

"What did you tell him, grandfather?" she asked.

He told her. Mollie was aghast. "Why, grandfather!" she cried. "That was awful! It would kill Joey to hear that!"

She covered her face with her hands, and stood still a moment. The old man got up and stood in front of her.

"Mollie," said he, "I've an idea you don't really want to give up this boy. I don't know's I'm right about it—you haven't said so—but I can't help thinkin' you're givin' up what you'd rather have than anything else on earth on account of all of us. You think you can't leave us. An' I just want to tell you you mustn't spoil your life for us! It ain't right. Go on and take the boy!

We sha'n't stand in your way. We'll rub along somehow!"

Mollie turned upon him like a vixen. "Don't say that to me!" she cried. "I won't listen to it a second! I won't desert you all now! Never dare to say that to me again!"

She rushed out of the room, and went up-stairs. In her own room she shut the door, and went over to the bed. Little Maggie lay there on top of the counterpane, full length, in her nightgown. Mollie stood looking at her a minute, then she knelt by the bed, put her cheek on Little Maggie's breast, closed her eyes and prayed. Maggie stirred and sighed, and pushed her head away. She did not want to be bothered. Then Mollie got up and went over to her bureau. She had just one thing belonging to Joey—just one thing to remind her of him. It was a red bandana handkerchief. Once in corn-planting time Mollie had broken the rope to her marker. Joey had spliced it with his handkerchief, having nothing else handy, and Mollie had kept the handkerchief. She put it away now in a little walnut box in which she kept some things that had belonged to her mother. There was a gold pin in the box, two little jeweled combs, a lace handkerchief, a ring and an old yellow letter. Mollie folded the red bandana carefully, put it in the bottom of the box, put her mother's things on top of it, then locked the box, and put it away in a dark corner of her closet.

"I don't want to keep a single thing in sight to make me think of him," she said. Then she went to bed, and began on her task of forgetting.

Mollie had some advantages in this struggle. For one thing she had perfect health. There were no weak nerves to come against her now, no dyspepsia, no tendency to headache to become aggravated in time of unhappiness and worry. Then she had the blessing of plenty of work. Taking care of the animals, running the fifty

But after awhile something happened which took Mollie's mind off her own affairs. One day it was discovered in the Gordon family that Aunt Kate and Mr. Hudson were engaged; that they were planning to go to the county-seat and he married on October 3d. This would be in less than three weeks. It was the grandmother who made the discovery, and Mollie was the last one to be told of it. They were all afraid to tell her. And well they might be, for she was in a towering rage when finally she did hear of it. She broke away from them all, and rushed out to the kitchen where Aunt Kate was preparing supper. Here she gave utterance to everything she could think of on the subject.

It was a shame! a disgrace! a reproach to the family, she said, for two old people like them to get married! Respectable people did not do such things! It should be—yes, it must be given up!

"I sha'n't have such a thing happen in my family!" she said. "You've got to give it up, Aunt Kate! You must! I won't have it! That old villain sha'n't come here again. The house is mine, and I'll rule it. He shall never cross my threshold again—never! Do you hear me, Aunt Kate?"

Aunt Kate paid no attention to her. At first, when Mollie had begun speaking of the projected marriage, the older woman had looked foolish and self-conscious, and had tried to murmur something about how she "and Richard had been sweet-hearts in their youth." But Mollie had soon silenced her on this; then Aunt Kate had taken on a look of righteous forbearance. "Young people didn't talk so to their elders when I was a girl," she said.

Mollie saw she was having no effect upon her. Then she gave harsh utterance to the first thought that had occurred to her upon hearing of the engagement. No matter how true it was, it would have been much better left unsaid. But Mollie was in no mood to be discreet now.

"You don't love that old man a bit!" she said. "It isn't for love you're wanting him! It's because he has land. You're after that hundred-and-sixty of his! That's what you want! You can't deny it!"

Aunt Kate closed her lips tightly, and went to the cellar, shutting the door between herself and Mollie. The girl went out on the back porch, and sat down on a step to think. Something Joey had said once was coming back to her now. "You can get your own way in this world a lot oftener by wheedling and begging than you can by storming," he had said. She believed now this was true. But wheedling and begging were so entirely out of her line!

She thought upon it all evening. She was really very miserable about Aunt Kate's going to do this thing. It seemed to her to be a hateful disgrace upon the family, and she was especially sensitive to family honor. At last, after thinking about it a long time, she decided to get her grandfather to plead with Aunt Kate.

Mr. Gordon did not think this would avail anything, but to please Mollie he sought out Aunt Kate late that evening, and tried everything he could think of in the way of gentle, persistent pleading. To his surprise he won the day. When he did not expect it at all Aunt Kate told him she would give Mr. Hudson up; that she would send him a note to-morrow telling him the engagement was broken. She admitted in a confidential way that she had had an eye on the old gentleman's property, but it was for the sake of her grandchildren, Esther and Little Maggie. When her son's wife lay dying four years ago, hadn't she, Aunt Kate, promised her she would take care of the two little girls, and see that they were provided for? If she married Mr. Hudson all his hundred-and-sixty would eventually go to them. However, she had decided to give it up now, seeing they were all so set against it, and she would send Mr. Hudson the note to-morrow.

Mr. Gordon was surprised and delighted with his victory. He forgot that Aunt Kate did not have the proper regard for promises, and it did not occur to him that she might be giving this one just to stop his importunity. He immediately went with the good news to Mollie. She, too, was delighted.

"Why, grandfather, that's splendid—just splendid!" she cried. "I didn't think she'd give in so! It's the best thing that ever happened! But we'll have to watch her, grandfather," she added, shrewdly. "Aunt Kate's pretty careless about her promises sometimes. We must never let old Hudson in here again. We'll have to watch after this."

But Mollie was more than willing to watch. She could do any amount of watching if only it would keep these two old people from plotting matrimony. And she did watch very carefully—at first.

Everything seemed all right for quite awhile. Then she grew careless. One day—it was the third of October—she had become very much engrossed with her live stock. The shotes and calves had gotten out of the pasture some time in the night, and she had to go all over the neighborhood in the morning looking for them. It was nine in the morning when she started out, and it was the middle of the afternoon before she had found them all, and had them safely inclosed in the pasture again. It was quite early in the forenoon when she was turning in at a neighbor's gate to make inquiries concerning the calves that she saw Mr. Hudson driving rapidly along the road toward the county-seat. She noticed that there was a woman in the phaeton with him, but he drove so rapidly, and the woman kept so well back and out of sight, that Mollie could not see who it was. She did not care particularly, anyway, but just wondered vaguely who the woman might be.

Mollie kept on with her work that day, and did not return to the house at dinner-time. It was about two in the afternoon, and she was mending her fence along the road, when she saw Mr. Hudson returning. Again the merry old gentleman

struck his horse, and drove very rapidly as he approached Mollie. But he did not get past so quickly this time, and she saw who the woman was. It was Aunt Kate!

Mollie's eyes widened, and she stared after them. "The old vagabond!" she ejaculated. "And Aunt Kate—I knew she needed watching! The first thing I know they'll be engaged again. Wonder where they've been, anyway!"

She remembered hearing of an old settlers' picnic that was to be held in a grove near the county-seat to-day, and concluded this was where Mr. Hudson had taken Aunt Kate to. She went on with her fence-mending then, and her brows contracted anxiously over the thought, "How will we keep Aunt Kate and old Hudson apart? How will we keep them from getting engaged again?"

She hammered away at broken boards and pounded stakes for another half hour; then suddenly an appalling thought occurred to her. It had been on October 3d that Mr. Hudson and Aunt Kate had first planned to go to the county-seat and be married. This was October 3d. They had been to the county-seat together! Had they been married?

Mollie dropped her hatchet suddenly and began running toward the house with all her might. She had thought herself very tired a moment before from running after the shotes so long, but now the tiredness was forgotten. When she reached the house it seemed empty and quiet. There was no one about but her grandfather.

She fell upon him. "Grandfather!" she cried, "where's Aunt Kate?"

The old man looked very much worried and troubled. "Where have you been all day, Mollie?" he said, fretfully. "I've been looking for you everywhere—"

"Grandfather, did Aunt Kate marry Mr. Hudson to-day?"

He hesitated. "I'm afraid that's it, Mollie," he said. "I couldn't stop her. I did all I could—"

Mollie threw her sunbonnet upon the floor in despair. She opened her mouth to speak, but closed it again. There was nothing to say. She was defeated; that was all! Then her grandfather began telling her how it had all happened, and everything that had been said and done, when suddenly Mollie interrupted him by asking where her grandmother and Esther and little Maggie were. He told her at once that her grandmother was up-stairs sick in bed, but he hesitated pitifully before telling where Esther and little Maggie were. Mollie stared at him. Finally he said that Aunt Kate and Mr. Hudson had stopped at the house on their way back from the county-seat, and had taken the two children with them to Mr. Hudson's cottage back in the fields.

Mollie gazed at him stupidly. What had Mr. Hudson and Aunt Kate wanted the two children for? Then the old man had to explain.

"They're going to keep them to live with them, Mollie. I tried to stop her, but I couldn't. They're her grandchildren, you know. She has the first right to them. We can't do anything—"

Mollie's face grew white suddenly. She had never thought of such a thing as losing the two little girls by Aunt Kate's marrying Mr. Hudson. "Grandfather," she said, pitifully, "they haven't taken little Maggie from me!"

"She had it all planned out ahead," said her grandfather, mournfully. "The little girls' clothes were packed and everything all ready to go since yesterday."

Mollie sank down on the sofa and closed her eyes. Her grandfather came over and sat near her. After awhile Mollie looked up.

"I can't understand it, grandfather," she said. "I can see why she took Esther. Aunt Kate's too old to keep house without some help, and Esther was getting so she could work a good deal, but Maggie—little Maggie—couldn't help her any! And she didn't love her or care for her much. It was I who loved little Maggie!"

But the grandfather knew why little Maggie was taken. "It was out of spite, Mollie," he said. "Your Aunt Kate never forgave you for something or other you said to her when you were quarreling about her and old Hudson being engaged the first time. I don't know what it was, but this afternoon when she was tying on little Maggie's sunbonnet I heard her say she'd 'show Mollie if she could sass her and insult her without paying for it!' Then I heard her say it again when she was lifting little Maggie into the buggy."

Then Mollie understood. She knew from experience that Aunt Kate could do a great deal from spite. It would be no use to try to get little Maggie back. She closed her eyes again when she realized this. Then her grandfather, thinking it best, went away and left her alone.

That night there was a great charivari at Mr. Hudson's. When an ordinary young couple was married in this neighborhood they were always "chivered," but when an odd match was made, or when a ridiculous old pair like these were married, the serenading they received was unearthly. Tonight tin cans and kettles were rattled and beaten below the windows, cow-bells and hand-bells were rung, shot-guns were fired, dogs barked and yells ascended. Above all was the sound of some one beating an old plow mold-board with a harrow-tooth. The noise this article can make when beaten in this way is past belief to those who have never heard it.

The neighbors for two miles around could hear the din, and went out on their porches to laugh and listen. Mollie heard it all plainly where she lay thrown across the bed in her room, but she was not trying to listen, and she did not laugh any. The wild-rose cheeks were tear-stained to-night, and the clear eyes were bloodshot and swollen. She was thinking how little Maggie would never share her bed any more. After awhile the feeble old grandfather made his way into the room, and sat down on the side of the bed. He put his hand on Mollie's disordered hair, and

smoothed her forehead. To him there was no one like Mollie.

"You don't seem to see the good side of all this, Mollie," he said. "I can't hardly think of anything else, and you haven't even seen it."

Mollie paid no attention. The grandfather continued. "Not long ago I think you—you—you sent Joey Madison away because you thought you couldn't take your family to live with you, and you couldn't leave them to get along alone. Well—Mollie, don't you see? You have no family now—only your old grandparents. Old Hudson has taken three of them. Don't you see, Mollie, any girl can take her old grandparents to live with her husband? If you really care about Joey, now—I think you're free—"

Mollie sat up suddenly, looking excited and frightened. She had never thought of this in the few harrowing hours that had elapsed since Aunt Kate was married.

"Grandfather!" she exclaimed.

"You've been a good girl, Mollie," said the old man, "and you ought to have a blessing if anybody ought. You've worked hard, and taken care of us as few would have done, though Aunt Kate has treated you so bad."

But Mollie did not hear him. She got up and walked about the room, then sat down by the window, then walked about the room again. Old Hudson, Aunt Kate, even little Maggie was forgotten. Only Joey held possession in Mollie's mind.

CHAPTER VII.

One day when Joey had been in Nebraska about five weeks he received a letter. He was sitting on the doorstep on the shady side of the house, staring disconsolately out over the landscape. There were two out-buildings in sight, a wind-mill, a row of cottonwood-trees, and miles and miles of barbed-wire fence. Besides this there was nothing but corn-field and sky to be seen. Joey was tired of it. But then Joey was tired of everything. He was tired of the farm in Nebraska, tired of the work, tired of the house and of the people who lived in it, and, of all things, he was tired of his own weary thoughts.

A woman with a baby in her arms came to the door and gave him the letter. He put it carelessly down on the doorstep beside him at first. He was tired of the letters from home, too. They were always writing him. Sometimes his sisters wrote to him twice a day. But after awhile he happened to notice that this letter was not in his sisters' handwriting, so he opened it with a little interest and looked at the signature. Then he started, his eyes bulged, and his chin dropped. The name was "Mollie Gordon!"

There were only about a dozen lines above the signature, and Joey read them dizzily. They were as follows:

"DEAR JOEY:—My Aunt Kate was married yesterday. She married old Mr. Hudson, and they have taken Esther and little Maggie to live with them in that little cottage back in the fields. I have no folks to take care of now except my grandparents, and if you will come home again I will talk over that matter with you again—I mean that that we talked of at the barn-raising that day."

"MOLLIE GORDON."

Joey partly arose from the doorstep, then dropped back upon it again. He turned his face back into the room behind him, and asked the woman there to read the letter, and tell him if he was dreaming or crazy or what. The woman still had the baby in her arms, and now had two more hanging to her skirts, but she came forward and read the letter aloud to Joey. She smiled in an amused way as she read, then told him she guessed it was all right, he wasn't dreaming.

Joey took the letter and went out and walked excitedly up and down under the row of cottonwoods. He still was afraid he was dreaming. Since coming to Nebraska he had so often dreamed that she had called him back. Sometimes he had dreamed it three times in one night. It was not till he was comfortably seated on an east-bound train at twelve o'clock that night that he felt easy on this point, and was convinced that Mollie had really written the letter.

He arrived in the familiar old county-seat on the evening of the second day, and got a chance to ride out to his own neighborhood with Jed Barker, who had been in that day with a load of hogs. When they reached Mollie's gate Joey without a blush asked to be let off here instead of going to his own home. Jed laughed immoderately at this, slapped Joey on the back, and teased him, asking him if he remembered what he had said about female farmers when he was cutting stalks last spring. But Joey was not interested in this now, and made Jed scarcely any answer as he scrambled from the side of the high hog-wagon.

He went around to the side door of the house, and just as he stepped upon the porch met Mollie coming out with a crock of milk in her hands. Whatever trouble the girl had been having, her beauty was none diminished by it to-day. Her figure was just as erect, her eyes as clear and her cheeks as fresh-colored as ever. When she saw Joey a look of joy and delight swept over her face, and she immediately put down the crock of milk. Joey came up and stood right in front of her.

"Mollie," said he, "did you mean what you said in that letter you sent me?"

She cast down her eyes in some embarrassment, but told him yes, she meant it. There was no coquetry about Mollie.

"You said you wanted to talk it over," pursued Joey. "What do you want to talk over? Do you love me the least bit, Mollie?"

She hesitated for some seconds, then spoke. "Joey," said she, "the man that marries me must take my grandparents, too, and he klud to them, and—"

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"Mollie, you know I'll be good to your grand-parents!" said Joey, indignantly. "You know I will!"

Mollie acknowledged that she did know it, but still she hesitated. "There's one other thing I want to speak about," she said. "It's about my farming. I don't want to work in the fields any more, of course. I'll give up that. I'm willing to keep house and cook. I like to do it, too. But, Joey, I don't want to—stay in the house all the time. I can't bear it! It suffocates me! I must have poultry, or garden, or something to work with to be out of doors awhile every day."

"Mollie, if you asked me to cook, and keep house, and let you run the farm, I'd agree to it to get you! But don't bring up any more of these things. Give over being so sensible for once! I want to know if you love me! Do you, Mollie?"

Here she hesitated again. She tried to back away from him, but she got against the wall. Then she covered her face with her hands, and said yes, she did.

Joey looked at her, and smiled. "You don't half love me," he said, "but you love me a little, and that will do to start with!" He put both arms around her, and kissed her. She had been hard to win—very hard, and for a moment he could not speak. Mollie, noticing this, felt intensely sorry for him, though she said nothing. A minute later they went into the sitting-room together, and Joey sat down in a big chair, while Mollie lit the lamp. Standing partly behind him, Mollie glanced furtively at Joey as she turned up the light. He had laid his head back in the chair, and closed his eyes for a moment. His face was very happy, but he looked old and worn as compared with what he used to be. He was not strong yet, and every pain of mind or body that he had endured since last harvest-time seemed to have left its mark on his face. An awful thought occurred to Mollie then. "What if Joey should die? He was so often ill!"

This fear was not well founded, and it did not last long, but it broke down the last atom of reserve in Mollie's heart. She went over to his chair, and knelt by it. She kissed his hand, and pressed her cheek against it—her beautiful, wild-rose cheek.

"You look so ill and poor, Joey!" she said. "You mustn't worry any more—never! You think I don't half love you! You don't know! I adore you! You think because I'm so practical about it, and remember other things, that I only care a little for you. It's only my way, Joey. That day at the barn-raising I didn't dare let you know how I cared. I knew you'd never give me up if you knew! It nearly killed me deciding against you the week after that! Yes, it would be as easy to die as to go through that again. You must believe I love you, Joey! You'll see how I'll prove it all the rest of my life!"

Joey took very kindly to this line of talk. But there was solemn wonder in his face as well as joy. "I'm not good enough, Mollie," he said.

Unheeding this, she continued: "Then I wouldn't leave my folks, and I wouldn't take them with me to live with you, and you said I didn't love you. I'd have fixed it up somehow if I'd cared, you said. You didn't know! You weren't in my place! To take so many to live with you was impossible. You can see that for yourself, Joey! And if you had taken care of them all for years as I have, and if you had gathered them together in the first place, and had worked for them for so long, you'd see how impossible it was to leave them, too. But it was hard to be faithful to them. No one'll ever know how hard it was for me! And you say I don't half care for you! Don't half care, when it's just agony to me to see a look of pain on your face! You know how I loved little Maggie, Joey! When they went away and took her with them I was nearly beside myself at first. Then when I saw their going left me free to think of you I almost forgot her. Think of it! Forgetting little Maggie! I just thought of you—you all the time! Do you believe I love you, Joey?"

"I believe it!" said Joey.

THE END

VALUE OF HUMAN HAIR

At a recent sale of relics in London one of the interesting items offered was a little lock of hair from the head of Edward IV. It brought \$40, breaking all records in prices for human hair. Figured at that rate, the value of the entire hirsute covering of that monarch's head would have been worth fully \$5,000. Compared with that transaction, the price paid for a clipping from the beard of George III. was insignificant. That bit of whiskers sold for \$8.75.

Careful estimates show that the London dealers require about five tons of human hair each year to provide for the demand. Most of this comes from France and Italy, but small lots are sent there from other parts of the world. In Limoges a specialty is made of hair cultivation for the market. Once each year a hair market is held, to which the young peasant girls flock with their long double braids of luxuriant hair. They sell these to the highest bidder, and return to their homes with pomade and ointments to cultivate another fine crop. The average price paid at the last occasion of the kind was only \$4.50 a pound.

Much of the supply comes from the convents, the hair of novices who take the veil commanding good prices. It is reported that some time ago a convent in England sold a ton of human hair for \$20,000, or \$10 a pound. A convent in Tours secured \$25 a pound from a Parisian hair-dresser for eighty pounds of hair. The average allotment of hair for each girl is about four and a quarter ounces, so it must have taken the crowding of at least three hundred novices to make up the eighty pounds.



WYANDOTTE BAKING SODA



THE value of every baking-soda depends upon two things—the quantity of the gas it makes and its absolute purity. It is what chemists call highly carbonated.

Wyandotte Baking Soda is entirely free from all impurities. There is nothing but soda and gas.

The soda holds the gas in readiness. As soon as it is mixed with sour milk or buttermilk the gas is liberated and rises freely through the dough. This is the operation known as rising, and makes the bread, cake or biscuits light.

The more gas there is the more easily it is liberated, and the more quickly this is done the lighter the baking, and therefore the better. The lightest, fluffiest, daintiest soda-biscuits, johnny-cakes and griddle-cakes are made with Wyandotte Baking Soda.

Wyandotte Baking Soda is so rich in gas that it takes less of it to make the baking as light as it should be. This is a great saving to you.

There is more in a package of Wyandotte Baking Soda for the same money than in any other package of good baking-soda.

This is also a great saving to you—in other words, Wyandotte Baking Soda costs less and goes further than any other soda. A baking-soda which is absolutely pure, which contains a higher percentage of carbonic-acid gas, which gives more for the money than any other kind of soda, certainly must be the best soda.

A big 12-ounce package of Wyandotte Baking Soda costs only 5 cents.

Your grocer perhaps does not keep it, and we are very anxious that he should. We want his name and address so that we can tell him about it.

If you will send his name and address to us we will send you by return mail a free coupon which will entitle you to a free package of Wyandotte Baking Soda.

One package will teach you that you can do better baking at less expense with Wyandotte Baking Soda than with any other soda you have known.

THE J. B. FORD COMPANY,
Box G, Wyandotte, Mich.



WYANDOTTE WASHING SODA



WYANDOTTE Washing Soda is ten times as effective as sal-soda, and better and stronger than all other washing-sodas.

It is the best thing known for loosening the dirt from the clothes, and making it easy to wash them.

Ordinary sodas don't do this to your satisfaction on account of the alkalis they contain.

Wyandotte Washing Soda contains no caustic alkali.

It is absolutely pure.

Bulk soda is a risky thing for you to use. You know nothing about it, and you can find out nothing about it.

Wyandotte Washing Soda is always put up by us with our name upon the box, and our guarantee behind our name.

It is the highest and best package of washing-soda you can buy for five cents.

It is better than any other package at any price.

It is a new soda, and your grocer may not have it.

Three Things Free

Send us the name of your grocer and we will send you free, three coupons—one coupon good for one package of Wyandotte Washing Soda; one coupon good for one package of Bell Starch, and one coupon good for one package of Wyandotte Baking Soda.

THE J. B. FORD COMPANY

Box E
Wyandotte, Michigan

We want the name of your grocer, so that hereafter he will always carry it. Send us his name, and in return for it we will send you a coupon which is good for a free package of the soda.

THE J. B. FORD COMPANY,
Box E, Wyandotte, Mich.

BELL STARCH

Bell Starch is the best laundering starch made. It is easily prepared, gives a rich gloss, and does not stick to the iron.

It saves time, money and bother—yours and the laundress's.

Bell Starch may not be sold by your grocer, but it ought to be. If it is not, send us his name and address, and we will send you a coupon which is good for one package of Bell Starch.

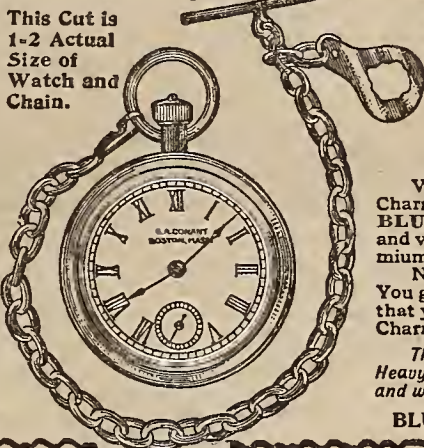
This coupon is entirely free.

It means that we think Bell Starch is so good that all you need is an introduction to it.

THE J. B. FORD COMPANY,
Box E, Wyandotte, Mich.



This Cut is
1-2 Actual
Size of
Watch and
Chain.



Watch and Chain FOR ONE DAY'S WORK.

We send this Nickel-Plated Watch, also a Chain and Charm to Boys and Girls for selling 1½ dozen packages of BLUINE at 10c. each. Send your full address by return mail and we will forward the Blaine, postpaid, and a large Premium List.

No money required. We send the Blaine at our own risk. You go among your neighbors and sell it. Send us the money that you get for it and we send you the Watch, Chain and Charm, prepaid.

This is an American Watch, Nickel-Plated Case, Open Face, Heavy Bevelled Crystal. It is Guaranteed to keep Accurate Time, and with proper care should last Ten Years.

BLUINE CO., Box 392 CONCORD JUNCTION, MASS.

WHY NOT SAVE IT?

When it comes to buying a vehicle of any kind you may just as well save all the money in the transaction above the manufacturer's price. No need to pay added commissions and expenses of traveling salesmen, middlemen, dealers, agents, etc.

WE HAVE NO AGENTS but sell direct from our factory at wholesale prices. We are the largest manufacturers of vehicles and harness in the world selling to the consumer exclusively.

IN VEHICLES WE MAKE

Rockaways, Surreys, Traps, Phaetons, Stanhopes, Driving Wagons, Top Buggies, Open and Top Road Wagons, Spring Wagons, Delivery Wagons, Milk Wagons and Wagons. In harness we make either single



No. 717 Canopy-Top Surrey, with double fenders. Price, complete, with curtains all around, storm apron, sunshade, lamps and pole or shafts, \$68; as good as sells for \$100.

double harness suitable to all the above vehicles and heavy team use.

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DON'T BE HARD UP—\$1600 A YEAR SURE

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MR. REED MADE \$88 FIRST 3 DAYS. Mr. Cox writes: "Get all I can do. Plate 20 sets a day. Elegant business." Mr. Woodward earns \$170 a month. Agents all making money. So can you. Gents or Ladies, you can positively make \$5 to \$15 a day, at home or traveling, taking orders, using and selling Prof. Gray's Platers. Unequaled for plating watches, jewelry, tableware, bicycles, all metal goods. Heavy plate. Warranted. No experience necessary. Manufacture the only practical outfits, including all tools, lathes and materials. All sizes complete. Ready for work when received. Guaranteed. New modern methods.

WE TEACH YOU the art, furnish recipes, formulas and trade secrets FREE. Failure impossible. THE ROYAL OUR NEW DIPPING PROCESS. Quick. Easy. Latest method. Goods dipped in melted metal, taken out instantly with finest, most brilliant plate, ready to deliver. Thick plate every time. Guaranteed 5 to 10 years. A boy plates from 200 to 300 pieces tableware daily. No polishing, grinding or work necessary.

DEMAND FOR PLATING IS EXORBITANT. Every family, hotel and restaurant have goods plated instead of buying new. It's cheaper and better. You will not need to canvass. Our agents have all the work they can do. People bring it. You can hire boys cheap to do your plating, the same as we, and solicitors to gather work for a small per cent. Replating is honest and legitimate. Customers always delighted. WE ARE AN OLD ESTABLISHED FIRM. Been in business for years. Know what is required. Our customers have the benefit of our experience.

WE ARE RESPONSIBLE and Guarantee Everything. Reader, here is a chance of a lifetime to go in business for yourself. WE START YOU. Now is the time to make money.

WHITE TO-DAY. Our New Plan, Samples, Testimonials and Circulars FREE. Don't wait. Send us your address any way. Address F. U. GRAY & CO. PLATING WORKS, 505 ELM STREET, CINCINNATI, OHIO.



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You save the jobber's commission and the retailer's profit when you buy direct from the factory. You pay the cost of making with one moderate profit added. We are not agents, but manufacturers of buggies, carriages, surreys, phaetons, wagons, harness and horse accessories. Everything guaranteed. With our illustrated catalogue you can order easily and safely. If what you order does not suit, send it back and we will pay the freight both ways. First, get the catalogue. You are welcome to a copy.

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To place our new improved Thermal Vapor Bath Cabinet in every home, we send them complete for 30 days, with alcohol, directions, formulas, to any address, upon receipt of \$3.50 each. Head steaming attach, 75c. extra. ORDER TO-DAY. Ours the best Cabinet made. Rubber-lined. Latest improvements. Cures without drugs a hard cold with one bath, rheumatism, lagrippe, female troubles, all blood, skin, kidney and nervous diseases. Guaranteed as represented or money refunded. Recommended by best physicians. We're responsible. Ship promptly. Descriptive book free. Special wholesale prices to agents. Address the m'rs. Toledo Bath Cabinet Co., Toledo, O.

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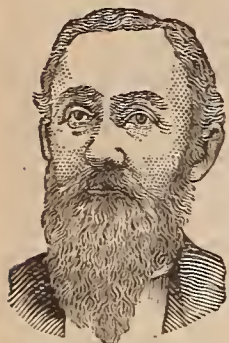
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A New Cure for Kidney and Bladder Diseases, Rheumatism, etc.—Free.



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Disorders of the Kidneys and Bladder cause Bright's Disease, Rheumatism, Gravel, Pain in the Back, Bladder Disorders, difficult or too frequent passing water, Dropsy, etc. For these diseases a Positive Specific Cure is found in a new botanical discovery, the wonderful KAVA-KAVA Shrub, called by hotanists, the *piper methysticum*, from the Ganges River, East India. It has the extraordinary record of 1,200 hospital cures in 30 days. It acts directly on the Kidneys and cures by draining out of the Blood the poisonous Uric Acid, Lithates, etc., which cause the disease.

Professor Edward S. Fogg, the Evangelist, testifies in the *Christian Advocate* that the Kava-Kava Shrub cured him in one month of severe Kidney and Bladder disease of many years' standing. Hon. R. C. Wood, of Lowell, Ind., writes that in four weeks he was cured of Rheumatism and Kidney and Bladder disease, after ten years' suffering. His bladder trouble was so great he had to get up five to twelve times during the night. Rev. Thos. M. Owen, of West Pawlet, Vt., and others give similar testimony. Many ladies, including Mrs. Lydia Valentine, East Worcester, N. Y.; Mrs. Maria Wall, Ferry, Mich., testify to its wonderful curative powers in Kidney and other disorders peculiar to womanhood.

That you may judge of the value of this Great Discovery for yourself, we will send you one Large Case by mail FREE only asking that when cured yourself you will recommend it to others. It is a Sure Specific and cannot fail. Address, the Church Kidney Cure Company, No. 409 Fourth Avenue, New York City.

Seed Potatoes

Hand Picked, Select Tubers, Strictly true to name. Grown from our own stock seed.

Vaughan's Early Acme.

[Earliest profitable big cropper we know of.]

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Our March Offer

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and to show you what we send out for Seed Potatoes, we will book orders during March only, as follows: 1 bushel (4 pecks) half each, Acme and Ohio, for \$1.50. 2 1/2 bushel (11 pecks) half each for only \$3.50. With every order FREE, our 1899 catalogue, 112 pages. A *Mirror of American Horticulture*. It tells the whole story for the Garden, Lawn and Farm. New Forage Plants, True Essex Rape, Giant Beggar Weed, Australian Salt Bush. ALL THE NEW ONES, but only GOOD ONES. Headquarters for seed of the great PAUL ROSE MUSK MELON introduced by us.



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A beautiful Solid Gold Shell Ring with a simulating Birthday Stone, mounted in Belcher setting, also an exquisite Tiffany style Opal Stick Pin.

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and ADDRESS ON A POST-CARD and we will send you 12 packages of Imperishable Violet Sachet Perfume to sell for us, if you can, at 10c. each. When sold send us our money, and we will send you FREE both prizes. (To each month is dedicated a precious stone. Any one wearing the stone of their birth-month insures them great and unending good luck.) These Birthday Rings surpass in beauty any FREE premium ever offered. Send address on post-card. No money required. Perfume returnable if not sold. Mention this paper.

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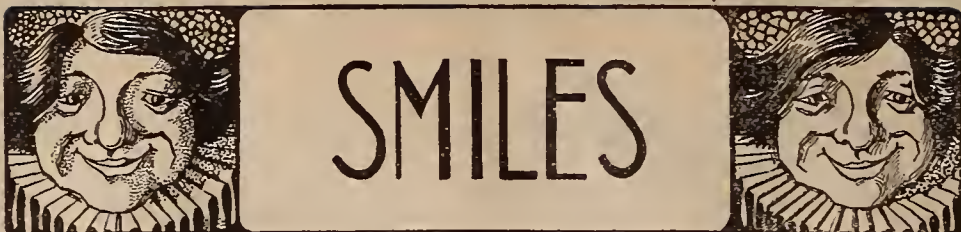
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HER PURSE

She screamed in terror when her purse Was snatched from out her jeweled hand, And hurled a modest semi-curse Toward the fleeing, bold brigand; And when the copper caught the thief, She seized the purse with anxious air, And breathed a sigh of sweet relief To find the treasures all were there.

A penciled note
Her fellow wrote;
A sugar-plum;
A wad of gum;
A hair-pin (bent);
A copper cent;
A button-hook
With broken crook;
A safety-pin;
A curling-pin;
A powder-rag;
A satehet-bag.

These were the treasures which she bore
Around with her from store to store,
While on a shopping tour to see
The many pretty things which she
Would love to buy if she had
The cash, and with a smile so glad
It almost made the copper sneeze,
She thanked him, and with sprightly ease
Tripped on to seek another store
Or two where she could shop some more!
—Denver Post.

POETRY THAT HURTS

THE Washington "Star" man found him. He was looking over the stock on the depot news-stand with great deliberation, taking one periodical after another, and then laying it down with a sigh.

"Do you wish to buy anything?" asked the young man in charge.

Pulling aside the large ear-lap which obstructed his bearing, the customer, evidently from the country, exclaimed:

"Hey?"

"I say, do you wish to buy something, or do you take this for a public reading-room?"

He pulled the ear-lap around and tucked it carefully back of his ear so as to save trouble.

"Young feller," he said, "I've got a long trip before me. I've got to travel twenty-five miles on a road which hasn't any competition and kin afford to take its time. I want something to read."

"Well, you'll find all sorts here."

"You're right familiar with all this literatoo, I s'pose?"

"Intimate."

"Well, I want you to recommend me to some-thing that you're dead sure ain't got no portry into it. I was projekkin' around through 'em on my own account when you took notice, but it's hard to judge. It'll all look plain an' straight-forward as a county-fair advertisement, an' the first thing you know, when you come to cut some of the leaves, you run plump into portry. It seems like they's bound to ring it in on you."

"What's the matter with you, anyhow?" inquired the youth. "What have you got against portry? It never did you any harm."

"That's where you're wrong. Nothin' has done so much to misrepresent the farmer in the eyes of the world as portry. Look at the 'daisy' portry. All summer they're singin' about 'a daisy day an' a lazy lay all the hazy day,' an' workin' the changes on it till you think that daisies was blessings straight from above. An' city folks pay five cents a bunch for 'em. They don't know that when daisies git to growin' in a field they'll come up so fast they push you along from behind when you're tryin' to weed 'em out. An' then there's snow portry. 'Beautiful snow, like a silent song, flirting, blurring, squirting along,' or words to that effect. City folks don't have to hitch up in three or four feet of it. When they git tired o' seein' it around they pay a boy fifteen or twenty cents to shovel it off, an' that's all there is to it. An' there's early mornin' portry, with nothin' said about the thermometer at zero in the sun; an' bird portry, without a single qualifying hint on hawks an' cbicken-thieves an' all the rest of it. The public in general gets the impression that all the farmer does is to go around tripping merrily an' singin' tra-la-la, an' then it gets to fingerin' an' wonderin' ef it ain't time he was payin' a little more taxes fur all them luxuries."

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B (getting on his feet)—"Then I will, sir.
C—"I would like to see you do it."

B (placing his hands on the window)—"I'll show you whether I will or not, sir."

C (as B tugs at window)—"Why don't you close it?"

B (getting red in the face)—"It—appears—to be stuck."

C—"Of course it is. I tried to close it before you came in."—Illustrated American.

HIGH ART

We were talking about the vanity of women, and whether her sex or ours is more susceptible to flattery, when a pretty matron of my acquaintance gave me this illustration: It was very near the time that a party of dinner guests were expected, when the housemaid approached madame and informed her that the maid from across the street had come over to assist.

"Now, Bridget," said her mistress, "you know I don't need her services; besides, there must not be any one in the kitchen. I must send her away."

Now, the pretty matron was wearing a gorgeous new frock, and her appearance was magnificent. She floated down into the kitchen.

"Maggie," she said—

"Oh, Miss —, how lovely you does look! No one would believe you a day over eighteen."

Maggie stayed.—Town Talk.

AN UNLUCKY MAN

"Hit does seem," sighed the old lady, "that my John hain't got any good luck in this worl'. He went in the war an' they shot off his leg. That wuz somethin', kaze he got a pension fer it. But on his way home the train run off the track, an' instead o' entin' off his good leg, so's he could git damages, it run over his wooden leg; an' to my sartin knowledge he's been in a life insurance company ten years, an' he ain't dead yit, an' 'pears like there ain't no prospects of it. I never did see a man hold on like him!"—Atlanta Constitution.

AN HONORED HERO

Casey—"Pbat? Yez be a hero iv th' war? Phy, yez niver lift home."

Hennessey—"Thrne. When Oi see thim all a-rushin' t' th' front, eyther fer glory er fer boodle, sez Oi to mesilf, 'Hinuiss, me boy, thrue heroism consists in self-denial. 'Twill be t' yer honor t' shtay at home an' lit th' other fellers reap th' rewards.' An' so Oi shtayed."—Life.

A PARENTAL BLESSING

The city clerk of Lewiston, Maine, who always demands the written consent of parents before marrying minors, recently received the following letter: "Mr. Clek, that girl of min she want to marry and I done care a darn. She got a feller and they earn ten dollars a week 'tween 'em. He good feller. She all right. You will marry them for me and be much obliged."

CONSISTENT TO THE LAST

"If I was to commit suicide at sea," said Weary Walker, as he shifted the hay-band on his left foot, "I'd jump from th' bow of th' boat."

"An' why not from th' stern?" queried Limpy Lannigan.

"If I jumped from th' stern," said Weary, "I couldn't avoid th' wash."—Cleveland Plain Dealer.

HALTED

"Stop, or I'll shoot!" called out the policeman. "Ha, ba!" laughed the malefactor, nor paused in his flight.

"Stop," the policeman now shouted, thoroughly incensed, "or I'll shoot at random!"

Here the malefactor halted at once; for even to such as he life is sweet.—Detroit Journal.

A USELESS WISH

"Oh," sighed the poetic lady, "bad I the wings of a bird!"

"Don't!" protested her husband. "Don't wish for the wings of a bird. If you had them some other woman would probably be wearing them on her hat before the season is over."—Washington Star.

HER CHANCE

Mistress—"I'd much rather raise your wages, Bridget, than have you leave us."

Bridget—"Well, mum, Oi was thinking of marryin', but wid your good offer Oi can save up better for the next proposal."

SHOCKING

"She is a brilliant woman," said he; "she shows great familiarity with the poets."

"Heavens!" shrieked the old maid; "does her husband know it?"—Life.

A GOOD COMPLEXION

Depends on Good Digestion

This is almost an axiom, although usually we are apt to think that cosmetics, face powders, lotions, fancy soaps, etc., are the secret for securing a clear complexion.

But all these are simply superficial assistants. It is impossible to have a good complexion unless the digestive organs perform their work properly; unless the stomach by properly digesting the food taken into it furnishes an abundance of pure blood a good complexion is impossible.

This is the reason so many ladies are using Stuart's Dyspepsia Tablets, because they promptly cure any stomach trouble, and they have found out that perfect digestion means a perfect complexion and one that does not require cosmetics and powders to enhance its beauty.

Many ladies diet themselves or deny themselves many articles of food solely in order to keep their complexion clear.

When Stuart's Dyspepsia Tablets are used no such dieting is necessary. Take these tablets and eat all the good, wholesome food you want and you need have no fear of indigestion nor the sallow, dull complexion which nine women out of ten have, solely because they are suffering from some form of indigestion.

Bear in mind that beauty proceeds from good health, good health results from perfect digestion, and we have advanced the best argument to induce every man or woman to give this splendid remedy a trial.

Stuart's Dyspepsia Tablets can be found in drug stores and cost but 50 cents per package. They are prepared by the F. A. Stuart Co., Marshall, Mich.

If there is any derangement of the stomach or bowels they will remove it and the resultant effects are good digestion, good health and a clear, bright complexion. Ask your druggist for the tablets and a free book on stomach diseases.

BUY THE BEST

If you want the best low down wagon you should buy the Electric Handy Wagon. It is the best because it is made of the best material; the best broad tired Electric Wheels; best seasoned white hickory axles; all other wood parts of the best seasoned white oak. The front and rear bounds are made from the best angle steel, which is neater, stronger and in every way better than wood. Well



painted in red and varnished. Extra length of reach and extra long standards supplied without additional cost when requested. This wagon is guaranteed to carry 4000 lbs. anywhere. Write the Electric Wheel Co., Box 96, Quincy, Illinois, for their new catalogue which fully describes this wagon, their famous Electric Wheels and Electric Feed Cookers.

NEW DOMESTIC COFFEE SEED

You can grow your own coffee for one cent a pound. It is the poor man's friend, and thousands prefer it to store coffee. It saves both health and dollars; is hardy, easy to raise, bears prodigiously. Grows well in any soil or climate, and ripens as early as corn. Prepare same as other coffee, and you will be surprised to find how good it is. Dr. J. M. Ashby says: "It is a great success; better than 30-ct. coffee." The Christian Advocate says: "One of the most wonderful discoveries." A. I. Root says: "More healthful and better than real coffee."

A large packet of seed and my catalogue mailed free for 10 cts.; 3 for 25 cts.; 7 for 50 cts. I will add free to above a large packet of 200 varieties of easy-growing Mixed Flower Seeds and a Book on Window Gardening and Care of Plants for all who order promptly and name this paper. Address A. C. COOK, Rock City, N. Y.

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Ladies or Gents size, stem wind and set. **WARRANTED 20 YEARS.** Elgin made movement in a 14 k. Gold plate hunting case, elegantly engraved. Fit for a king. No better watch made than an Elgin. Must be seen to be appreciated. Special Offer for the next 60 days, send us your full name and address and we will send this watch by express C. O. D. with privilege of examination. If found satisfactory pay the agent on special price, \$4.49 and express charges. A guarantee and beautiful chain and charm sent free with every watch. Write at once as this may not appear again. Address, **KAT. MFG. & IMPORTING CO., 334 Dearborn St., B161, Chicago**

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To place the **NEWEST IMPROVED THERMAL VAPOR BATH CABINET** in every home, we will send to one person in every town, **ONE CABINET WITH HEATER** for \$8.00, or two for \$15.00. Cabinet is rubber lined, made of fine goods. Send at once and cure your Rheumatism and La Grippe. **TOLEDO THERMAL BATH CO., 19 to 21 Ontario Bldg., Toledo, Ohio.** Price \$6.00

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90 CENTS BUYS A \$2 SPRAY PUMP.
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The Latest Improved McCREERY FOLDING VAPOR BATH CABINET. Has a Door and all the latest improvements. A home treatment that will cure la grippe, rheumatism, all blood, skin & kidney troubles; reduces superfluous flesh. Price \$5; Face steamer \$1.50 extra. Folds neatly in small space. Free descriptive book and testimonials. Special inducement to salesmen. **MOLLENKOPF & McCREERY, 191 Summit St. Toledo, O.**

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Dr. Isaac Thompson's Eye Water

GLEANINGS

QUEER NAMES FOR WIVES

The wives of some of the Indian braves have names as odd and often as droll as their husbands. They seem to have cognomens of their own, too, and not to take those of their spouses only. Some of the actual names given in a census of the families of the scouts at one place include Mrs. Short Nose, who was before her marriage Miss Piping Woman; Mrs. Big Head, formerly Miss Short Face; Mrs. Nibbs, formerly Miss Young Bear; Mrs. White Crow, formerly Miss Crook Pipe; Mrs. Howling Water, formerly Miss Crow Woman; also Miss Sweet Water, Miss Walk High, daughter of Mr. White Calf, and Miss Osage, daughter of Mr. Hard Case.

MAPS FOR READY REFERENCE

The Chicago, Milwaukee & St. Paul Railway Co. has just issued in convenient form for household, library and school reference an atlas of seven colored maps of the world, the United States and our new possessions in the Atlantic and Pacific Oceans, together with an amount of valuable information connected therewith—all up to date. This atlas will be sent free to any address on receipt of six (6) cents in postage.

Apply to Geo. H. Heafford, General Passenger Agent, Old Colony Building, Chicago, or to Robert C. Jones, Trav. Passenger Agent, Cincinnati, Ohio.

It is stated that the merchandise carried by rail in the United States is double the amount of all the other nations of the earth combined. This means that the 70,000,000 people of the United States transport twice as much merchandise as the remaining 1,400,000,000 of mankind.

A LAMPLIGHT COMPANION

Between now and Spring time there will be many opportunities of an evening to read up on the different portions of the Great Northwest.

To this end the Chicago, Milwaukee & St. Paul Railway Co. has printed for free distribution to Eastern farmers a number of illustrated instructive pamphlets regarding the various States traversed by its lines.

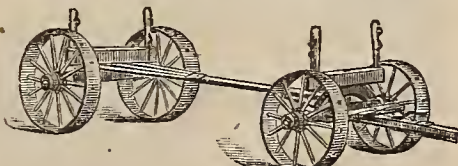
In sending your address to W. E. Powell, General Immigration Agent, Old Colony Building, Chicago, Ill., please say if your preference is for information about Wisconsin, Iowa, Minnesota, Northern Michigan or North Dakota.

No charge for pamphlets or for replying to all inquiries about any section of the Great West.

The year 47 B. C. was the longest year on record. By order of Julius Caesar it contained 445 days. The additional days were put in to make the seasons conform, as near as possible, with the solar year.

FARM WAGON FOR ONLY \$19.95

In order to introduce their Low Metal Wheels with Wide Tires, the Empire Manufacturing Co., Quincy, Ill., has placed upon the market a Farmer's Handy Wagon, sold at the low price of \$19.95. The wagon is only 25 inches high, fitted with 24 and 30 inch wheels with 4 inch tire.



This wagon is made of best material throughout, and really costs but a trifle more than a set of new wheels and fully guaranteed for one year. Catalogue giving a full description will be mailed upon application by the Empire Manufacturing Co., Quincy, Ill., who also will furnish metal wheels at low prices made any size and width of tire to fit any axle.

The regular army is made up of 25 per cent of foreigners, while in the navy 52 per cent of the petty officers and 42 per cent of the seamen are foreign born. Forty per cent of those that went down with the Maine were of this class.

REMOVAL NOTICE

We wish to call the attention of our readers to the new number of the Marvin Smith Co. of Chicago. Our readers have been accustomed to addressing them at 64 and 66 South Clinton Street, where they started in business less than three years ago. By strict attention to business and honorable and straightforward dealing with their patrons, coupled with the positive bargains they are able to offer by their plan of doing business, they have outgrown their old quarters in this short space of time, and have taken the large space at Nos. 55, 57 and 59 North Jefferson St., Chicago.

The number of newspapers published in this country is 19,582 in the English language, with 741 German, 65 Swedish, 56 Spanish, 51 French, 35 Bohemian, 33 Polish, 25 Italian, 18 Dutch, 13 Hebrew, etc.

Jayne's Expectorant is known almost the world over for its wonderful efficacy in the cure of Throat and Lung Diseases.

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A Rare Combination OF BEAUTY AND UTILITY. Combines in a high degree the qualities of a first-class fence, and beautifies the lawn and surroundings, thereby enhancing the value of the property. Takes up little space, harbors no weeds and is strong and durable. It greatly adds to the attractiveness of Public Grounds, Parks, School Lawns, Church Enclosures, Cemetery Lots, etc. Cheaper than a good wood Picket Fence—Lasts indefinitely. Looks best and is best with our ornamental steel posts. Catalogue, circulars, etc., **FREE.** Address **HARTMAN MFG. CO. Box 53, Ellwood City, Pa. or R.13, 309 Broadway N.Y. City.**

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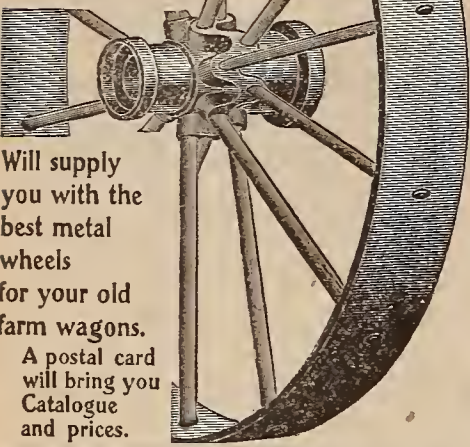
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In the March number of the *Western Garden and Poultry Journal*, Des Moines, Iowa, you will find full information how to get a 200-egg Incubator—**RELIABLE, PRAIRIE STATE or SUCCESSFUL, FREE.** Sample copy of the paper sent on request. Address as above.

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When hogs are low in price, everybody stops breeding. That forces the prices up and then nobody has hogs to sell. Breed now and by the time your hogs are ready to market prices will be up again and hogs will pay. **THE FAMOUS O. I. C. SWINE** breed the best, grow the fastest and mature the earliest. **TWO** of them weighed **2806 LBS.** Send for circulars. First order secures agency in your locality. **L. B. SILVER CO. 101 Summit St., Cleveland, O.**



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WIT AND HUMOR

HE ATTRACTED A CROWD

In front of the New-England building a member of the Salvation Army stood the other day with his tin-labeled contribution-box, with its plainly lettered invitation to contribute to a Christmas-dinner fund, poised in front of him, and watched the passers-by. Perhaps a lack of dropping nickels and dimes prompted an innovation in his methods, perhaps not. Anyway, he suddenly raised his voice and cried: "How to make 5,000!" He stopped suddenly and so did several people. "How to make 5,000!" he cried again. By this time twenty people were halted about him. "How to make 5,000!" The twenty grew to a crowd. Then he finished the sentence: "How to make 5,000 poor people happy with a Christmas dinner!" Of course, a large proportion of the crowd drifted away, but quite a number left a remembrance in the tin box. And the wise soldier of the Cross smiled.—Cleveland Plain Dealer.

THE RAINY DAY CAME

Two young attorneys were talking in the post-office corridor some time ago, and one of them said: "Jack, I've sworn off smoking. Sort of a New-Year's resolution, you know. I suppose you have taken some sort of a pledge, haven't you?" "No," replied his friend. "Not one. I tried it last year and it failed." "How was that?" "Well, I have always been a sort of a spendthrift, as you know. So last New-Year's day I said to myself, 'Jack, every one else is making some sort of a resolution, why not make one yourself?' So I resolved to save up a little money for a rainy day. That afternoon I placed a ten-dollar note carefully away, and—the next day it rained."—Baltimore News.

A PEN SKETCH ON MAN

As a sample of what an old maid can do with a pen we submit the following: "Man is a two-legged animal that chews tobacco and walks on the forked end. Most men are born; we never heard of but one that wasn't, and he was made of mud, just for a sample. Man's life is full of disappointment, growls and corn-cob pipes. He goes forth like a lion in the morning and leaves his wood for his wife to chop, and in the evening he sneaks home with his pants ripped, and raises Cain about hard times. He has la grippe on road-working days, and walks twenty miles to a circus. He will chase a jack-rabbit four miles through the snow, and then borrow a horse to ride half a mile to the post-office."

DEFENDING HIS PROFESSION

"Now," said the attorney for the defense, "let us take up the bill presented by the plaintiff in this case for alleged services rendered to my client. I say alleged services, gentlemen of the jury, because these figures show every indication of having been doctored." "Would it not be better to say lawyered?" asked an indignant physician who was serving as one of the jurors.—Chicago Tribune.

CHANGE OF BASE

Lady (to servant)—"Well, Mary, is your sister married yet?" Mary—"No, mum." Lady—"How's that? I thought she was to have been married last week." Mary—"Yes, mum, so she was; but her young man, instead of buying the furniture, bought a bicycle."

HE KNEW

A schoolmaster had been giving a lesson on physical force. "Boys," said he, "can any one of you tell me what force it is that moves people along—for example, in the street?" "Please, sir," replied the first boy, "it's the police force."

ITS NATURAL EFFECT

"How many of these sheep got out of here?" asked the angry farmer. "I don't know," replied the new hired man, rubbing his eyes. "After I watched five or six of 'em jump over the fence I seemed to lose the count. That always puts me to sleep."—The Chicago Tribune.

PREPARED FOR THE WORST

The other day a couple of little girls came to a physician's office to be vaccinated. One of them undertook to speak for the other, and explained: "Doctor, this is my sister. She is too young to know her left arm from her right, so mama washed both of them."

ITS ORIGIN

Instructor (of philology class)—"What is the derivation of the word 'ahuanac'?" Smart young man—"It comes from 'all men ache,' sir. That's why it always has so much to do with patent medicines."—Chicago Tribune.

Dr. Worst's INHALER

Sent Free on Trial.

A Scientific Cure for Catarrh, Asthma, Bronchitis, Colds, and all Throat and Lung Diseases.

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THE GREATEST DISCOVERY OF THE AGE.

Dr. E. J. Worst, Ashland, Ohio, has made himself famous in a few years by a treatment for Catarrh and bronchitis, of which he is the originator. While physicians generally were treating these very common diseases with sprays and douches, Dr. Worst perfected his dry air treatment. Air is the only agent that is fine enough to reach the air cells of the head and respiratory organs. It was the agent that carried the disease there, and it must be the one to successfully remove it. Vapors, sprays, and atomizers are all dangerous. Nature never intended them for the windpipe, and instantly repels them. When you get a drop of water down "the wrong way," how soon you cough and gag. This is because nature has placed a very sensitive valve in the windpipe, which closes the instant water in any form comes in contact with it. The only way to reach the inflamed membranes of these organs is by properly medicating the air you breathe. Not one person in fifty was ever cured by the old method of treating catarrh, now everywhere condemned. Dr. Worst has been so uniformly successful in curing patients, that he writes, asking us to make the following announcement:

SPECIAL OFFER.

"I will for a short time mail any reader of the FARM & FIRESIDE, one of my new scientific Catarrh Inhalers and medicine for one year, on three days' trial, free. If it gives satisfaction, send me \$1.00; if not, return it. It cures more cases than all others combined, hence this offer."

Thousands of people have been cured by Dr. Worst's treatment after suffering for many years from Catarrh, Asthma, Hay Fever, Colds, Pains and Roaring in the Head, Bronchitis, Sore Throat, Headache, Partial Deafness, and all diseases of the air passages. The treatment is indorsed and used by all leading physicians. Space forbids printing a long list of testimonials. Persons can receive descriptive pamphlets and testimonials by writing, if interested. Below are given two testimonials from grateful people who have been cured by Dr. Worst's wonderful dry air treatment.

"I have received and tested the Inhaler. I am happy to say the longer I use it the more I esteem and consider it the most effectual treatment I have ever used for catarrh and lung affections. It has relieved a constant cough I have had for eight years." **PROF. E. S. NASON, 6027 Main St., Germantown, Pa.**

"I have been using your Catarrh Inhaler, which I consider a little wonder. I have had Catarrh for seven years, and had taken so many remedies that I had become discouraged. I am almost deaf, but your Inhaler is restoring my hearing and stopping the discharges." **H. V. HAWKINS, Algona, Ia.**

If you are afflicted with any of these diseases, do not fail to write at once. Address, **DR. E. J. WORST, BOX 164, ASHLAND, O.**

Vapo-Cresolene

Whooping Cough, Croup, Asthma, Colds

Hundreds of thousands of mothers use Vapo-Cresolene. Do You? Cresolene cures Whooping Cough every time; stops Croup almost immediately, and if used at once will cure a Cold before any complications can arise. I. N. Love, M.D., of St. Louis, says: "I have instructed every family under my direction to secure it." Mrs. Ballington Booth, says: "I recommend that no family where there are young children should be without it." W. R. Chichester, M.D., of New York, says: "As a vehicle for disinfecting purposes Cresolene is immediately successful." Anthony Comstock, says: "Malignant Diphtheria in my house; Cresolene used; cases recovered in two weeks; no others were affected." Descriptive booklet with testimonials free. Sold by all druggists.

VAPOR-CRESOLENE CO., 68 Wall St., New York.
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Within 700 miles of Chicago, we will send you this **TOP BUGGY BY FREIGHT C. O. D.** SUBJECT TO EXAMINATION, you can examine it at your freight depot and if found **PERFECTLY SATISFACTORY, EXACTLY AS REPRESENTED, EQUAL TO BUGGIES THAT RETAIL AT \$60.00 TO \$75.00 AND THE GREATEST BARGAIN YOU EVER SAW,** pay the freight agent **OUR SPECIAL PRICE \$38.90,** and freight charges, less the \$1.00 sent with order.

WE MAKE THIS TOP BUGGY IN OUR OWN FACTORY IN CHICAGO, from better material than most makers put in \$75.00 buggies. **Latest Style For 1899.** Body, 24x34 from the Best Seasoned Wood. Gear, Best That Money Can Buy. End Springs, as illustrated, or Brewster Side Bar. Wheels, High Grade Screwed Rim Sarven's Patent. Top, 24 ounce, Daily Rubber Heavily Lined, full side and back curtains. Painting, Guaranteed equal to any \$150.00 buggy work. Body black. Gear dark green or Red. Upholstering, heavy green French body cloth or Evan's Leather.

\$38.90 IS OUR SPECIAL PRICE for top buggy complete, wide or narrow track, full length side and back curtains, storm apron, carpet, wreath, anti-rattlers and shafts. **GUARANTEED TWO YEARS** will last a lifetime. For Buggies at \$15.95 and up. **WRITE FOR FREE BUGGY CATALOGUE. YOU CAN MAKE \$500.00 This Year Selling OUR \$38.90 BUGGIES. ORDER ONE TO-DAY. YOU CAN SELL IT FOR \$60.00. DON'T DELAY.**

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Send us your address and we will tell you **HOW TO CURE CATARRH—AND HOW TO STAY CURED.** Address **The W. S. CALBRAITH CO., CHILLICOTHE, OHIO.**

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How to Reduce it Mrs. L. Lanier, Martin, Tenn., writes: "I reduced my weight 21 lbs. in 15 days without any unpleasant effects whatever." Porely vegetable, and harmless as water. Any one can make it at home at little expense. No starving. No sickness. We will mail a box of it and full particulars in a plain sealed package for 4 cents for postage, etc. **HALL CHEMICAL CO., B Box St. Louis, Mo.**

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THE ELECTRICITY

from the batteries will turn a needle through your table or hand. Cures Rheumatism, Liver and Kidney Diseases, Weak and Lame Back, etc. For advertising purposes we will give ONE DOLLAR FREE to one person in each locality. Address **R. J. SNEAD & CO., Dept. No. 235, VIRLAND, New Jersey.**

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Green cut bone is essential to a balanced ration for all fowls, young or old. The Webster & Hannum bone cutter has always been the favorite with poultrymen.

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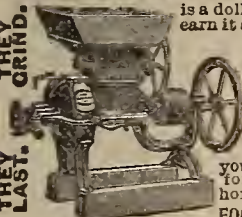
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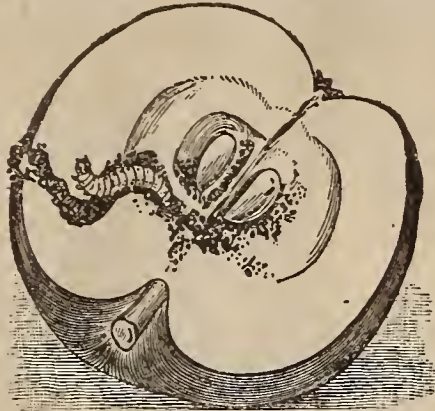
OUR MISCELLANY

THAT gifted after-dinner speaker and raconteur, Judge Henry Holland, tells with such a deep sense of humor the story of the embarrassed but generous-hearted young man who felt called upon to relieve the sudden cessation of drawing-room conversation, which oftentimes overtakes even the most brilliant social circles. With the blushes surmounting his cheeks he timidly turned to the daughter of the hostess, who was not present in the rooms, and inquired:

"Ho-how is yo-your mo-mo-mother? N-Not th-that I gi-give a damn, bu-but it ma-makes ta-talk."—New Haven Register.

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Our readers will do well to write Wm. Stahl, Quincy, Illinois, and get his catalogue, describing twenty-one styles of Spraying Outfits and full treatise on spraying the different fruit and vegetable crops, which contains much valuable information, and may be had for the asking.

THE FARMER'S GREATEST NEED

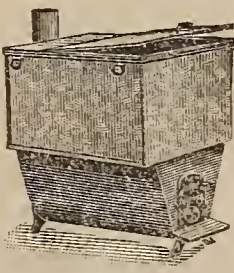
The one thing most needed on every farm is a practical, light-running, easily operated weed killer and cultivator for young crops; a machine that will thoroughly loosen and pulverize the surface soil and effectually destroy the weeds without the great waste of time and labor that was necessitated by the use of the old-style cultivator and hand hoes. The most economical tool that has yet been introduced for this purpose is Hallock's Success Anti-Clog Weeder and Cultivator.

This machine enables the farmer to successfully cultivate all crops, from grain to strawberries. By its frequent use throughout the season the yield will be doubled, and at the same time the cost of cultivation will be reduced from one half to two thirds.

The manufacturers, D. Y. Hallock & Sons, York, Pa., will mail to any one who writes for them, sheets of testimonials, giving in detail the experience of hundreds of farmers with this weeder in all sections of the country.

MANY amusing stories are being told of the recruits in service. The New Orleans "Times-Democrat" tells one of a German in the naval reserve, who was walking his post and calling the hours as required. He called, "Seven bells, and all's well." The next call, however, was a variation. It was, "Eight bells, and all is not well; I have droppit my musket oberboard."

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Reader's attention is called to this device, which is sold at \$12.50 for 50-gallon capacity. By feeding poultry and animals cooked food during winter at least one third of the feed is saved; also having stock in a healthy condition, preventing hog-cholera among your hogs and insuring the hens laying freely during the winter months. On application

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Mr. Geo. S. Singer, of Cardington, Ohio, is the manufacturer of Olentangy Incubators and Brooders, an automatic machine which is said to be one of the best in the country. We advise our readers to send for a catalogue.

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The 30th edition of the New Guide to Rose Culture, the leading Rose Catalog of America, will be sent free on request. 132 pages, superbly illustrated. Describes 75 entirely new roses and all old favorites. Makes success with D. & C. Roses possible to all. Describes all other desirable flowers. Free sample of our magazine Success with Flowers, on request. The Dingle & Conard Co. West Grove, Pa.

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200 varieties. Also Grapes, Small Fruits, etc. Best rooted stock. Genuine, cheap. 2 sample currants mailed for 10c. Desc. price-list free. LEWIS ROESCH, Fredonia, N. Y.

Marshall, G. Mary, N. Ohmer, Seaford, DE. **STRAWBERRY** 10 for 15 cents. 40 VARIETIES. LIST FREE. FINE **POULTRY** WICK HATHAWAY, Madison, O. **GLADSTONE** Strawberry and all other good berries. Low prices and description in our new catalogue, Free. SLAYMAKER & SON, Dover, Del.

Your Name and Address

plainly written on a postal card and mailed to L. J. Farmer, Box 14, Pulaski, N. Y. will secure valuable information on Strawberry Culture and catalogue of Berry Plants FREE.

Special Offer—10 plants "Earliest" Strawberry (new) only 10c postpaid. Write to-day. This ad. will not appear again.

THE HIGHEST GRADE GRASS SEEDS

IN THE WORLD TO-DAY ARE SUPPLIED BY

Peter Henderson & Co.

GRASS SEED FOR HAY, GRASS SEED FOR PASTURE, GRASS SEED FOR LIGHT SOILS, GRASS SEED FOR HEAVY SOILS, GRASS SEED FOR GOLF LINKS,

AND THE "HENDERSON" LAWN GRASS SEED.

Also many NEW FORAGE PLANTS of value.

Our AMERICAN FARMERS' MANUAL for 1899, 32 pages, devoted entirely to Seeds for the Farm, mailed free on application to those who state where they saw this advertisement. Correspondence invited.

PETER HENDERSON & CO.

35 & 37 Cortlandt St., NEW YORK.

15 Packets FLOWERS 20 Fine SEEDS. BULBS

for 25c Post-paid. For 25c. we will send the following collection of SEEDS and BULBS. All large packets and good blooming bulbs.

- 1 Pkt. Salvia, mass of red bloom.
- 1 " Heliotrope, very sweet.
- 1 " Chinese Lantern, bright red fruit.
- 1 " Weeping Palm.
- 1 " Aster, new Giant White.
- 3 " Pansy, red, white, blue.
- 1 " Sweet Pea, red.

1 Pkt. Japanese Morning Glory, beautifully variegated. Lavender, old favorite, delightfully fragrant. 1 " Myosotis, beautiful blue Forget-me-nots. 1 " Butterfly Orchid, covered with flowers all year. 1 " Verbena Mixed, new and dwarf, very fine. 1 " Petunia, fringed mixed, curved and twisted. as follows: 1 Begonia, 1 Amaryllis, rare, 1 Spotted Calla Lily, 2 Montbretias, red, 1 Hyacinth, summer flowering; 1 Tulip, double, 3 Gladioli, 1 Butterfly, 1 dwarf white, The Bride, 1 Scarlet, and 10 other beautiful flowering bulbs.

15 Packets Seeds and 20 Bulbs in all for 25c., postpaid, with our new illustrated catalogue.

J. HOSCOE FULLER & CO., Floral Park, N. Y.

Cheap Seed AND GOOD

We can help you get them. Send 8 cents in stamps and receive four packages of home grown seed:—Twiss, new early cabbage; Potomac, the new tomato; Dirigo, the earliest best; Quincy Market, the sweetest early corn, with our flower and vegetable seed catalogue, full of engravings. With one exception it is the largest vegetable catalogue published. Cut off one of the home grown labels, write in the name of this paper, and it shall count as 25 cents toward any order amounting to \$1.00, excepting our special collections, in which we offer 33 packages seed of choice vegetables for \$1.00, and 15 packages of selected flower seed, 40c.

J. J. H. GREGORY & SON, MARBLEHEAD, MASS.

SEEDS CHEAP

BEST in the world from 1 cent per packet up. Celebrated for strong and rapid growth. Postage paid. Large lot of extra packages Free in every order. Oldest reliable seedsmen in the west. Send yours and neighbor's address for prettiest large catalog ever printed.

R. H. SHUMWAY, Rockford, Ill.

SEED DUE BILL FREE

To get new customers to test my seeds I will mail my handsome catalogue for 1899, lithographed and beautifully illustrated, and a 10c. Due Bill, good for 10c. worth of seeds for trial, absolutely free. It is full of bargains. All the Best Seeds, Bulbs, Plants, Roses, new Fruits, Farm Seeds, Potatoes, etc., at lowest prices. Ten Great Novelties offered without names. I will pay \$50. FOR A NAME for each. Don't buy your stock until you see this new catalogue. Several varieties shown in colors. Great inducements for orders this year. You will be surprised at my bargain offers. Send your address Post-to-day. Tell your friends to send too. Old customers will receive a copy.

F. B. MILLS, Seedsmen, Box 46, Rose Hill, N. Y.

NUT and TREES FRUIT TREES

300 ACRES—61 YEARS Superior stock of all desirable varieties: Chestnuts, Walnuts, Apples, Pears, Plums, etc. shade and ornamental trees; small fruit plants, etc. Catalogue free.

PARRY'S POMONA NURSERIES Parry, New Jersey.

STRAWBERRY

Prices. Safely and cheaply delivered anywhere on continent. Catalogue free. Continental Plant Co., Strawberry Specialists, 39 South St., Kittrell, N. C.

ARKANSAS

Desha County, 3000 acres, \$2.50 per acre, on White River, near the Mississippi River; heavily timbered—white oak, hickory, cypress. White River navigable whole year. New Orleans market for shooks and staves for snags hogshead.

S. A. McGUIRE, 1201 Empire Building, New York.

Your Name and Address

plainly written on a postal card and mailed to L. J. Farmer, Box 14, Pulaski, N. Y. will secure valuable information on Strawberry Culture and catalogue of Berry Plants FREE.

Special Offer—10 plants "Earliest" Strawberry (new) only 10c postpaid. Write to-day. This ad. will not appear again.

Wherever the pain may be,
there is the place for an

Allcock's POROUS PLASTER

It never fails to perform its work quickly and effectually, and, more than that, it does its work while you do yours.

Beware of the many imitations made to sell on the reputation of "Allcock's." When you buy Allcock's you obtain absolutely the best plaster made.

SEND US ONE DOLLAR



AND THIS AD, and we will send you this BIG 300-pound new RESERVOIR STOVE by freight C. O. D., subject to examination. Examine it at your freight depot, and if found perfectly satisfactory, and the GREATEST STOVE BARGAIN you ever saw or heard of, pay the freight agent our Special Price, \$11.50, less the \$1 sent with order, or \$10.50 and freight charges. This stove is size 8x18; oven is 15x17x11; top, 24x44; height, 28". Made from best pig iron, large flues, cut tops, heavy cut centers, heavy corners, heavy linings, with very heavy sectional fire-back, large bailed ash-pail, slide hearth-plate and side oven-shelf, pouch feed, oven door kicker, heavy tin-lined oven door, handsome nickel trimmings on doors, front, sides, etc. Extra large, deep, porcelain-lined reservoir. Best Coal Burner made, and we furnish an extra wood grate, making it a perfect wood burner.

WE ISSUE A HANDING GUARANTEE with every stove. Your local dealer will ask at least \$20.00 for such a stove, and this and you will save at least \$8.00. The freight is only about \$1.00 for each 500 miles.

Our New Free Stove Catalogue shows the most complete line of 1899 stoves, ranges and heaters at \$1.95 and up. THIS NEW BIG 300-POUND ACME QUEEN RESERVOIR COAL STOVE at \$11.50, one dollar with order, is a wonder of value. Write at once before our stock is sold. Address SEARS, ROEBUCK & CO., Cheapest Supply House on Earth, Fulton, Desplaines and Wayman Sts., CHICAGO, ILL.

\$100. IN CASH AND OTHER PRIZES EASILY OBTAINED

FREE! In a few hours selling our goods WATCH WITH A CHAIN AND A CHARM (not a "watch chain and charm," same as some other concerns are giving. Look for the omission of the word "watch" in our advertisements and do not be deceived). Our Watch is Hunting Case, Ladies' and Gents' size, stem-wind and is heavily gold plated and guaranteed a reliable time-keeper.

FREE! Under the Red Cross, a History of our war with Spain; over 300 pages, finely illustrated, cloth bound, published by Price \$2; you can get it from us by a little work in spare time.

FREE! A Fine Rochester Lamp with a Revolving Combination Shade and Reflector. This is a fine present either to keep or give away. Nothing in your home will attract more attention than a nice lamp.

How To Obtain These Prizes: We wish to introduce our patent Asbestos Wick Lamp. They make a beautiful white light nearly equal to electricity and last almost forever, need never be trimmed. We will give one of the above valuable prizes to any one who will sell for us 12 wicks. When sold send us the \$1.20 by mail, and we will send the premium, all charges prepaid, as a reward for your valuable services. You can sell these in a few moments among your friends. Send us your order. In same mail with the 12 wicks, we will send you a \$100. Cash Prize Offer, setting forth how you may obtain \$100 by selling only one dozen of our wicks, we will also send our full list of premiums and terms. We are obliged to make these extraordinary offers on account of the delusive advertisements of our imitators. When making remittances always state what premium you are working for. Address **American Asbestos Wick Co.** 35 Frankfort St. New York, Box 5.

FOR 14 CENTS

We wish to gain this year 200,000 new customers, and hence offer 1 Pkg. 13 Day Radish, 10c
1 Pkg. Early Ripe Cabbage, 10c
1 " Earliest Red Beet, 10c
1 " Long Light'n'g Cucumber 10c
1 " Salzer's Best Lettuce, 15c
1 " California Fig Tomato, 20c
1 " Early Dinner Onion, 10c
3 " Brilliant Flower Seeds, 15c

Worth \$1.00, for 14 cents, \$1.00

Above 10 pkgs. worth \$1.00, we will mail you free, together with our great Plant and Seed Catalogue upon receipt of this notice & 14c postage. We invite your trade and know when you once try Salzer's seeds you will never get along without them. Onion Seed 68c, and up to 1 lb. Potatoes at \$1.20 a bushel. Catalogue alone 5c. No. 145

JOHN A. SALZER SEED CO., LA CROSSE, WIS.

\$5 to \$30 3000 BICYCLES

Everyone a Bargain. NEW AND SECOND HAND. 2d Hand—good as any for service. \$5 to \$12. New '99 Models \$12.50 to \$30. None blither. We guarantee to save you money. Largest variety to select from. Lowest prices ever quoted. Every customer satisfied. Shipped subject to examination and approval. No money in advance. A few good AGENTS WANTED. For price list and particulars address the old reliable cycle house, **BROWN-LEWIS CO., (B N) 293 Wabash Ave., Chicago.**

EVERY WOMAN

Can buy a WORLD'S WASHER on trial and no money paid until it is perfectly satisfactory. Washes easy. Clothes clean, sweet and white as snow. Child can use it. I pay freight. Circulars free. **C. E. ROSS, 10 Clean St., Lincoln, Ill.**

\$70 EACH MONTH

and expenses or commission to good agents for tacking up signs and introducing our wonder working rings. Write for particulars. **ELECTROPATHIC CO., Buffalo, N. Y.**

SELECTIONS

FACTS ABOUT SAMOA

THE Germans want the ruling hand in Samoa. They cannot claim this on the strength of their superiority in trade with the islands, for in this respect they fall far below the United States, Great Britain and Australasia. In 1897 the islands imported \$53,415 worth of goods from the United States, \$13,322 from Great Britain and only \$5,562 from Germany. The Germans, however, prepare and export a great deal of copra, and they own most of the land that foreigners hold in the islands. Of the 135,000 acres, about one sixth of the area of the group, owned by foreigners at least 85,000 acres, including the best land in the islands, is owned by the Germans. This landed estate was secured by the original German trading firm, and its successors have never parted with an acre of it.

The great drawback of Samoa is that it is so far from markets. Its best products are tropical fruits, which are abundantly produced, but distance from markets prevents exportation. California is fifteen days by steam, and freight rates are prohibitive. Besides, California is itself a fruit country. New Zealand is five days distant, but its whole population is not much more than that of Baltimore. Sidney is eight days away by steam, but Australia and New Zealand have islands nearer them, notably Fiji, on which grow all the tropical fruits they want. So no fruit is shipped from Apia, the only port of the islands.

In 1888 the Ceylon coffee disease first appeared on the plantations of Samoa and in a short time put an end to coffee production in that group. No attempt has since been made to raise coffee.

Practically the whole business of Samoa is based to-day upon the cocoanut, and the export of copra, the dried meat of the cocoanut, represents nearly all the exports of the islands. In 1897 nearly 11,000,000 pounds of copra, the native product, were exported in addition to the large quantity raised on the German plantations. But even in her copra Samoa is not particularly fortunate. Some fifteen years ago there was an enormous demand for copra, with the result that the cocoanut-tree was planted on the coasts of every sea where it would grow. A few years later the markets were glutted with copra, prices fell about one half, and the days of the prosperity of that trade have not since returned. What with her political troubles and the causes that have conspired to keep her commerce small, Samoa has not had a very prosperous history. The time is coming, however, when she will see better days. The resources of the group, which, all told, is about as large as Rhode Island, have yet scarcely been touched. In fact, nobody lives more than three or four miles from the sea and the inner parts of the islands have not been utilized.—New York Sun.

WHERE THEY BOX THE BRIDE'S EAR

In Lithuania, a province of Russia, there is a curious wedding custom which requires that the bride's ears be boxed by her mother before the ceremony.

The custom may seem rather brutal to an American, but it is really done with the best of motives, and the most tender-hearted mother in Lithuania will insist on fulfilling her part before the couple are married.

The reason for it is simply this: If the young woman, after some years of wedded life, finds that she has made an unhappy choice of a husband, she can sue for a divorce, on the ground that she was forced into the marriage, and the fact that her mother boxed her ear, just before the ceremony was performed, can be brought forward as positive proof that she was an unwilling bride.

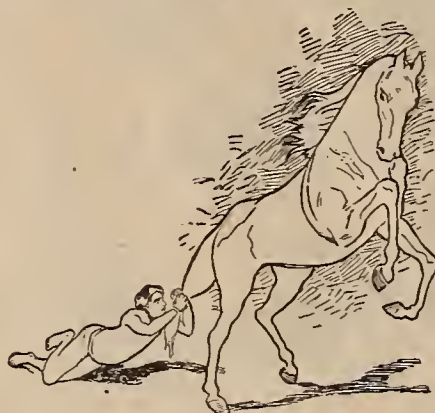
HOW TO OPEN A NEW BOOK

Hold the book with its back on a smooth or covered table; let the front board down, then the other, holding the leaves in one hand while you open a few leaves at the back, then a few at the front, and so go on, alternately opening back and front, gently pressing open the sections till you reach the center of the volume. Do this two or three times and you will obtain the best results. Open the volume violently or carelessly in any one place and you will likely break the back and cause a start in the leaves. Never force the back; if it does not yield to gentle opening, rely upon it the back is too tightly or strongly held.—Modern Bookbinding Practically Considered by William Mathews.

DRAGGED TO DEATH

THE "PALE HORSE" AND ITS RIDER

In the middle ages men racked their brains to invent barbarous forms of punishment. Just as in Nero's time unhappy Christians were martyred as a public spectacle and the gladiators "butchered to make a Roman holiday," so in these later times punishment was inflicted to amuse the public, and the cruelty of the punishment often added to the pleasure of the populace. To see a man tied to the streaming tail of some untrained horse and dragged to death by the wild creature was a rare spectacle, and was sure to draw a good turn-out and increase the popularity of the governing power which provided such cheap and harmless (!) amusements for the people. Can we imagine any man voluntarily submitting himself to be tied to the horse and dragged and kicked to death? Such a thing would be incredible.



And yet men are standing still, unresisting, while every day time is binding them faster and faster to that "pale horse" whose rider is Death.

One of the earliest things we are taught as children is that the mightiest things are only minute things in aggregation and combination; that

GREATEST EFFECTS SPRING FROM SMALLEST CAUSES

We sing it in the song which tells how the ocean is made up of water drops, and the earth of sand grains. We are told of the century-living oak, springing from an acorn which a bird might destroy, and being builded into ships that the winds and waves buffet in vain. We are taught that it is "the little foxes that spoil the grapes." Yet all that teaching leaves us apparently unimpressed with the incalculable importance of attending to the beginning of things, of throttling those "little foxes" which gnaw and nibble and destroy.

Who cares anything about a cold? Who allows a cough to interfere with arrangements for business or pleasure? Yet that cold or cough is a seed of disease, and in its final flowering often shows the hectic tints of consumption. Of all people who die daily, one sixth are victims of consumption. And of that great army of victims it is probable that hardly one need have perished had the disease been taken in time. But the victims stood still and let themselves be bound day by day a little firmer to this cruel disease, and when they awoke to their danger there was no help for them. Yet

THERE IS HELP

for coughs however old and obstinate, for bronchitis, weak lungs, bleeding lungs, and similar ailments which if neglected, or improperly treated, lead up to consumption.

"It was twelve years ago that I derived so much help from Dr. Pierce's medicines," writes Mrs. Olive Stevens, of North Harvey, Cook Co., Ill. "I was afflicted with a scrofulous tumor in the left side of my neck. It was fully as large as a large-sized walnut, and so painful that I could get but little sleep at night. I doctored with several physicians, but received no benefit. I was told by one doctor that a change would do me good. I went to Michigan, was there three months, and while there took Dr. Pierce's Golden Medical Discovery and used Lugol's Solution, as directed in your pamphlet. While away I gained sixteen pounds, the tumor became smaller, and less painful, and to-day there is not a sign of it.

"The 'Golden Medical Discovery' cured my neck entirely."

There are thousands of men and women alive to-day and in the full enjoyment of perfect health, who owe their very life to Dr. Pierce's Golden Medical Discovery. After trying all available medicines, being

GIVEN UP BY DOCTORS

losing all hope of recovery themselves, they have begun the use of "Golden Medical Discovery" and persisted in it until a perfect cure was effected.

"My wife had hemorrhage of the lungs," writes W. A. Sanders, Esq., of Hern, Mason Co., W. Va. "She had ten hemorrhages, and

the people all around here said she would never be well again. But she began to take Dr. Pierce's Golden Medical Discovery and she soon began to gain strength and flesh. After taking ten bottles she was *entirely well*. Should you think this will do you any good to publish, just use it, and if any one disputes the merits of this almost omnipotent medicine they may inclose self-addressed envelope with stamp, and I will answer, the same as written in this letter."

THERE IS NO DISPUTING THESE CURES

They are facts. They are not scattered cases. They are only specimens of thousands of similar cures. It is not believed that consumption in its ultimate stage is curable. But the greatest peril of the consumptive is to give up, to submit passively, because the local physician has said "nothing more can be done for you." It is just such cases as these which have been cured by "Golden Medical Discovery." Were they cases of consumption? We know only what is said of them. The local physicians said it was consumption. There was weakness, emaciation, hemorrhage, night-sweats, cough. The doctors said "nothing more can be done. It is a hopeless case." And after thus passing sentence upon the victim somebody suggested Dr. Pierce's Golden Medical Discovery, and the "incurable" case was "cured."

The action of the "Discovery" is entirely philosophic. When the blood grows weak the body must grow weak with it. Weak lungs mean inevitably weak blood; weak in quality, weak in quantity, weak in the nourishing elements required to offset the waste and wear of the tissues. Directly you begin to put strength into the blood, you put strength into the weak organs which are fed by the blood. The healing power of Dr. Pierce's Golden Medical Discovery comes from the fact that it deals directly with the blood. It purifies the blood from the waste and poisonous matter which the enfeebled kidneys and liver have not been able to get rid of. It puts into the blood the right materials for building up the body, all ready for use. It strengthens the stomach, increases the activity of the blood-making glands, and restores the digestive and nutritive organs to a condition of sound health.

FREE CONSULTATION

Sick people are invited to consult Dr. Pierce by letter absolutely free of charge. Every letter is read in private, answered in private and its contents guarded as a sacred confidence. No third party need know of the nature of the correspondence, as all answers are sent in plain envelopes, closely sealed and without printing or other advertising upon them. Dr. Pierce has nearly a score of skilled specialists in chronic diseases to assist him in his practice. Write without fear and without fee to Dr. R. V. Pierce, chief consulting physician to the Invalids' Hotel and Surgical Institute, Buffalo, N. Y.

Substitutes are dangerous. Why not get what *you* have chosen instead of letting somebody else force on you what *you* do not choose. The whole secret lies in the fact that the substitute costs the dealer less because there's no responsibility behind it. He makes a better profit on the substitute, and he *makes it out of you*. Don't let him.

WRECKED UPON ROCKS AND SHOALS

The government marks the rocks and shoals which are a peril to navigators by certain buoys and bells which warn the mariner away. No man can be a pilot until he knows the location of every one of these marks, and just what they signify. Nature marks the shoals and rocks of the sea of life whereon men may be shipwrecked. Every man who is to pilot the frail vessel, his body, over this sea should know these marks and signs. This knowledge plain and clear is only a part of the information given in Dr. Pierce's Common Sense Medical Adviser. Its 1008 pages are full of wisdom and of counsel, and many a life would be saved if this book were in the hands of every man and woman. This great work is given away by its author and sent *absolutely free*, on receipt of stamps to pay the expense of mailing *only*. Send 21 one-cent stamps for the paper edition, or 31 stamps for the cloth-bound volume. Address Dr. R. V. Pierce, Buffalo, N. Y.

IT BEATS THE BAND

The newest and most inspiring piece of Sheet Music, arranged for piano, is "The Pioneer Limited March," composed by Capt. Frederick Phinney, Bandmaster United States Band, published by S. Brainard's Sons Co., Chicago, Ill.; distributed only by the Chicago, Milwaukee & St. Paul Railway. Enclose fifty (50) cents and address Geo. H. Heafford, General Passenger Agent, 535 Old Colony Building, Chicago, Ill.

FAR-AWAY MARRIAGE CUSTOMS

The Chinese have an elaborate wedding ceremonial. It begins with presents and the reports of astrologers. The parents then correspond. The girl's father offers his "ugly and ill-favored child"—for such is Oriental etiquette. The father of the boy, not to be outdone in politeness, describes his son as "slothful, indigent and weak in intellect." The bride's procession, for which even a mandarin must make way, goes to the bridegroom's house and is carried over the threshold.

Japanese politeness is like the Chinese; female subjection is the same, but national good humor makes it more tolerable. There is a beautiful symbolism in the lighting of the torches, when the bride's and bridegroom's lights are permitted to mingle.

The Persian wedding includes a torchlight procession of the bridegroom and his friends to the bride's house, where the groom and his companions secure her, and then return to the beating of drums.

An Arab wedding lasts seven days. The husband sees his wife's face after the ceremony is over. It is then proper for him to cry out in delight at its loveliness, and then, as in the Bible, "the friend of the bridegroom, who standeth and heareth him, rejoicing greatly because of the bridegroom's voice"—the people outside the tent raise an answering cry.

In Turkey the bride stands behind a screen during a part of the ceremony, and is first seen at its conclusion. A Moorish wedding is also a seven days' affair.

There is a clever custom sometimes followed in Persia. A crowd of young men rush into the feasting crowd, capture the guests, and shut them up in a dark room. They pay ransom to get out, and the money is added to the bride's dowry, a naive way of enriching the young couple.

IS YOUR NAME HERE?

A contributor has been amusing himself by trying to answer the question or series of questions. What man in the history of the world whose name began with A—and after that every other letter of the alphabet in order—exerted the greatest influence upon the thought and conduct of mankind?

Of course, there are some letters which are not very prolific in the names of great men, but we think most of our readers will be surprised to see how many of the most illustrious names in history are included and how few are excluded.

In some cases the compiler seems to have selected names quite as much with a view to comprehending in the list men of many countries as because the name given was that of the greatest man of his time. The list follows:

Aristotle, Baco, Confucius, Darwin, Ezra, Franklin, Goethe, Homer, Isaiah, Justinian, Kant, Luther, Mohammed, Newton, Ossian, Plato, Quintillian, Rousseau, Shakspeare, Tasso, Uhland, Virgil, Washington, Xavier, Young, Zoroaster.—London Globe.

READ THIS BEFORE YOU MAKE COMPLAINT

If you have at any time during the past month mailed your subscription to us, or given it to a club-raiser, or sent it to some paper that is clubbing with ours, or renewed your subscription through any source, please do not write a complaint to us about it because you receive a letter from us requesting you to renew your subscription, or because you receive a paper marked "Your time is out."

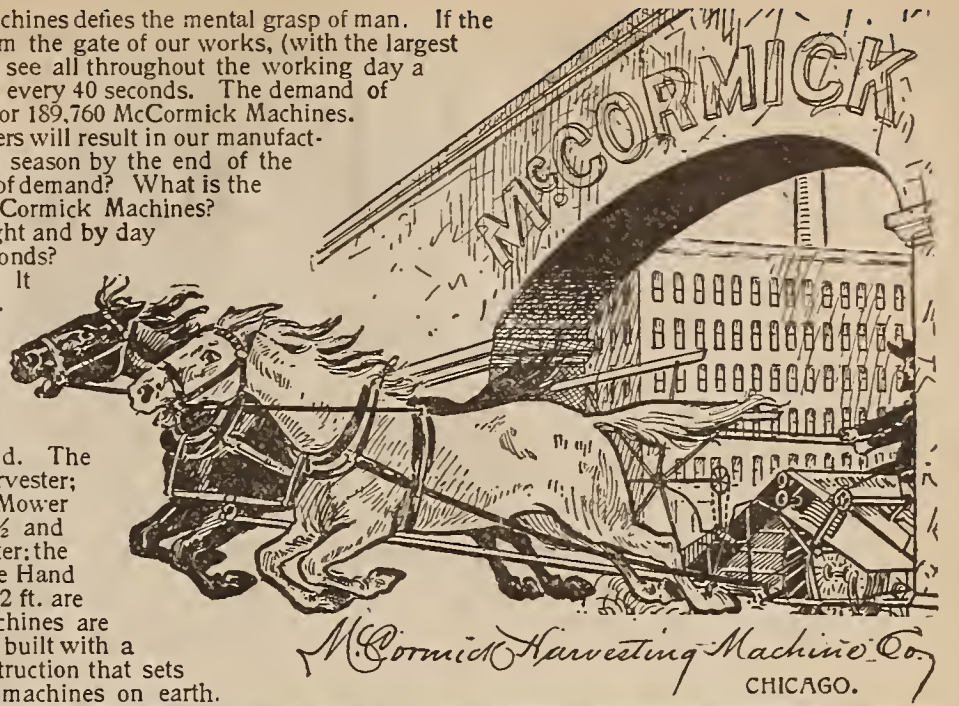
After a subscription is received in our office it takes about a month for the change to be made in the printed mail list; this is the reason you may receive papers marked "Your time is out" after you have sent your renewal. But do not write for at least one month after receipt of our letters and circulars, or papers marked "Your time is out," and do not write at the end of one month unless your subscription is not extended on the yellow label.

If our friends will bear in mind the above facts, and be a little patient, it will save them unnecessary worry and trouble, and save us much time and work.

KILLING MONTANA WOLVES

It is said that wolves and coyotes are becoming very numerous and quite bold in all parts of northern Montana. Recently the stockmen of the Flat Creek range organized a drive and scoured a section of country about ten miles wide and twenty miles long. Twenty-four mounted men and several packs of trained hounds participated in the battle, which lasted all day, and over fifty scalps were secured.

The enormous output of McCormick Machines defies the mental grasp of man. If the machines we manufacture were to issue from the gate of our works, (with the largest output in the world) the spectator would see all throughout the working day a McCormick Machine emerging at full gallop every 40 seconds. The demand of the farmers in the past season of 1898 was for 189,760 McCormick Machines. This continuing tremendous call of the farmers will result in our manufacturing and selling still larger numbers in one season by the end of the century. What is the cause of this unheard of demand? What is the reason of the everlasting popularity of McCormick Machines? Why are we forced to run our Works by night and by day up to the output of a machine every 40 seconds? The cause is plain. The answer is simple. It is The Building of the Best in the World. Almost seventy seasons of success have elapsed since Cyrus H. McCormick invented the Reaper in 1831. In all that time the McCormick has been The Best Built Machine in the World. The McCormick Machines for 1899 are The Best in the World. The McCormick Right Hand Self-binding Harvester; the New 4 Mower 4 1/2 and 5 ft. cut; the Big 4 Mower 6 ft. and 7 ft. cut; the One Horse Mower, 3 1/2 and 4 ft. cut; the Folding Daisy; the Corn Harvester; the Corn Husker and Fodder Shredder and the Hand and Self-dump Hay Rakes 8 ft., 10 ft. and 12 ft. are The Best in the World. All these eight machines are McCormick End of the Century machines; built with a brilliance of invention and honor in construction that sets a noble standard to all other agricultural machines on earth.



McCormick Harvesting Machine Co. CHICAGO.

"PLANET JR." CHAPTERS.—No. 5.

A Farmer's Art Gallery

is the new "PLANET JR." catalogue for 1899. Beside telling all about these famous farm and garden tools, it gives also 16 full pages of fine photographic views, showing interesting farm scenes in California, France, Australia, Manitoba, etc., with the "PLANET JR." tools "getting in their work."—the Hand Drills and Wheel Hoes, the Horse Hoes in all their many forms, the wonderful Pivot Wheel and other two-horse tools. It is the most interesting and inspiring catalogue of farm tools ever issued; and it is mailed free upon request.

Chapter No. 6 will tell about "The French Mule" and his work.

S. L. ALLEN & CO., Box 1107 F, Philadelphia.

<p>\$17.50 for this team harness, cut from select oak-tanned leather, traces 6 ft long, 1 1/2 in. wide, with cockeye, 18-ft lines; Hook & Terra pads, pole strap 1 1/2 in.; collar strap 1/2 in. Big Bargain. All kinds sing & dbl. harness.</p>	<p>16.35 and up. BEARING. All steel Disc Harrow, with or without center disc; discs 16 and 20 in., 8 sizes. Our improved 12-16 disc, \$15.99. Pay double, you get no better.</p>	<p>\$7 10 for steel lever harrow; cuts 10 ft; 60 teeth, 2 sections; also 3 & 4 sections. \$6.25 buys a 2-horse plow, turns furrow 14 in. Shipped on trial without any money.</p>	<p>\$16.25 BUYS this 6-ft. steel mill; guaranteed easiest running strongest made; pumping and power mills, 8 to 16-ft.; also tanks, pumps, pipe & all pumping supplies. We furnish complete outfits. Prices all reduced. Catalog free. Don't fail to send for it.</p>	<p>\$10.95 this 2-horse Cultivator; made of best material; steel wheels, all complete. A riding cultivator, \$16.99. 5-shovel 1-h. cultivator, spreads to 35 in., all steel; retailed at \$4; our price \$2.55. ROLLERS, ALL KINDS.</p>	<p>\$1.00 Bow seeder \$1. Crank Seeder \$1.50. Sows wheat, oats, grass seeds, etc. 4 to 10 acres an hr. Work perfect. Usually retailed for \$3.</p>	<p>59c for a hand corn planter. \$9.80 for this One-horse corn, bean, pea and Garden Seeder. Drops in hills and drills. 12 ac. a day. Fertilizer extra. Handles all kinds of seed perfectly. Check Row corn planter, most accurate made. No crooked rows, no missed hills. 90 styles planters and drills.</p>
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Send for our FREE 320-Page Spring Agricultural Catalog. MARVIN SMITH CO., 55-57-59 N. Jefferson St., W 26 Chicago, Ill.

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- 1 The Dixie and Columbia Grain Threshers, the greatest savers and cleaners on earth.
- 2 The Matchless Clover Huller, it saves 1/4 more seed than any other machine and cleans it to perfection....
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The Aultman & Taylor Machinery Co.,
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A PERFECT HARROW AND PULVERIZER. Independent Discs. One Man or Boy easily Operates it under all conditions.

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The key to success is found between the wires; this permits the use of our double-strength Coiled Spring Wire, which, like the lock, never loses its grip on the fence, on the trade or on the consumer. Replies to adv. of this date will get special discount.

THE HARD STEEL WIRE FENCE CO.,
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STOCK BOOK ON PRACTICAL SURGERY for every Farmer and Breeder. The importance of Surgery and how to do it is clearly shown and illustrated plainly with cuts of stock tied, on both sexes. Price \$2.00 with order, or \$2.50 C. O. D., with liberty of two hours' time to examine, and return if not wanted. Address **FARMER MILES, Charleston, Illinois.** Please write Name, County and State plainly.



Thousands of sufferers from chronic stomach and bowel troubles have testified that their recovery dates from the time they were induced to try Ripans Tabules through reading just such an advertisement as you are reading now. A case in point is that of a young lady of Hillsboro Bridge, N. H., who writes as follows:

I am twenty-five years of age and was long troubled with faint and dizzy attacks. I doctored with different physicians, but they gave me no relief. Was just about ready to give up all hope when I saw Ripans Tabules advertised in a Boston paper. I purchased a box, and before I had used them a week, I found great relief. I can freely recommend Ripans Tabules to all persons afflicted with my ailments and I shall never allow myself to be without the Tabules.

A new style packet containing TEN RIPANS TABULES in a paper carton (without glass) is now for sale at some drug stores—FOR FIVE CENTS. This low-priced sort is intended for the poor and the economical. One dozen of the five-cent cartons (120 tabules) can be had by mail by sending forty-eight cents to the **RIPANS CHEMICAL COMPANY, No. 10 Spruce Street, New York**—or a single carton (TEN TABULES) will be sent for five cents.

SPECIAL 60 DAYS OFFER TO INTRODUCE OUR LATEST LARGE, POWERFUL ACHROMATIC TELESCOPE, THE EXCELSIOR.

5 to 10 Mile Range **JUST WHAT YOU WANT** **ONLY 99 CENTS**

POSITIVELY such a good Telescope was never sold for this price before. These Telescopes are made by one of the largest manufacturers of Europe, measure closed 12 inches and open over 31-1/2 feet in 5 sections. They are BRASS BOUND, BRASS SAFETY CAP on each end to exclude dust, etc. with POWERFUL LENSES, scientifically ground and adjusted. GUARANTEED BY THE MAKER. Heretofore, Telescopes of this size have been sold for from \$5.00 to \$8.00. Every sojourner in the country or at seaside resorts should certainly secure one of these instruments, and no farmer should be without one. Objects miles away are brought to view with astonishing clearness. Sent by mail or express, safely packed, prepaid for only 99 cts. Our new catalogue of Watches, etc., sent with each order. This is a grand offer and you should not miss it. We WARRANT each Telescope JUST AS REPRESENTED or money refunded. WANTS ANOTHER? Brandy, Va. Gents.—Please send another Telescope, money enclosed. Other was a bargain, good as instruments costing many times the money.—E. C. Allen. Send 99 CENTS by Registered Letter, Post Office Money Order, Express Money Order, or Bank Draft payable to our order, or have your storekeeper or newscaster order for you. **EXCELSIOR IMPORTING CO., Dept. M., Excelsior Bldg., New York, Box 753.**

GREAT MISSING-WORD CONTEST

By The Atlanta Weekly Constitution

THE missing-word contest is well understood by all readers of The Atlanta Weekly Constitution. The prize is made up by putting aside TEN PER CENT of the subscriptions received from contestants, and the sum is paid to the successful contestant or contestants, as the case may be. EVERY DOLLAR THAT COMES IN ADDS TEN CENTS TO THE PRIZE. Over thirty thousand subscriptions to The Weekly Constitution will expire during the time of the contest, which, with the new subscriptions, ought to easily make the ten per cent fund reach \$3,000 or more. Closes April 1st.

A PRINCELY PRIZE FOR NAMING A SINGLE WORD

The Weekly Constitution has conducted a series of missing-word contests during the past few years, which have aroused a great deal of interest and enthusiasm and given entire satisfaction to all participants. Thousands of dollars have been paid out in cash prizes. The contests were designed to test the knowledge of the people on the works of well-known writers, and the educational influence thus exerted has been of vast importance to the contestants. The contest here advertised will end April 1, 1899, and will be the last one of the season. The word and the result will be published in The Weekly Constitution early in April.

The author of the sentence used in this contest is a charming Southern writer now living. The omitted word is an EVERY-DAY ENGLISH WORD, not a compound word, not a proper name, and is used in its ordinary sense. The aim is to make it just middling hard and easy, to strike an average, to give a fair shot on a guess even if you do not locate the sentence. Take a separate piece of paper about 3x5 inches (you need not write the sentence out in full) and at the top write, "The missing word for April 1, 1899, is _____," and then sign your name and address. Send your guess soon.

You are to supply the one word that has been dropped out. The book containing the sentence has been sealed and placed in the vault of The Weekly Constitution, Atlanta, Georgia.

This is the Sentence "I was immediately conscious of the effect which his _____ produced on his companions."

We (THE ATLANTA WEEKLY CONSTITUTION) Will Put 10 Per Cent of the amount we receive for subscriptions, wherein the party subscribing enters the missing-word contest, into a fund for distribution among those who name correctly the missing word. For instance: If only one contestant gets the word right, he or she, as the case may be, will have all the money. If more than one strike it, the sum will be equally divided, each correct answer receiving its proportionate share of the money.

Condition Precedent for Sending a Guess at the missing word is that each and every guess must be accompanied by a year's subscription to THE WEEKLY CONSTITUTION; the guess must be sent in the identical envelope that brings the money that pays for the subscription; forgetting it, or leaving it out by accident or otherwise, or not knowing of the guess at the time you subscribed, or any other reason will not entitle one to send a guess afterward. The guess must come with the subscription or not at all. Should a party send more than one guess, he or she will be entitled to a share of the fund for each correct guess sent; there will be no capital prize—every one will get a first prize; if more than one person names the missing word properly the money will be equally divided, and all stand exactly on the same footing. See instructions above how to send your guess on a separate piece of paper about 3x5 inches. Send before April 1, 1899.



THE ATLANTA WEEKLY CONSTITUTION

THE WEEKLY CONSTITUTION

Is one of the Greatest Weekly Newspapers in the World. It is a Twelve-page, Seven-columns-to-the-page Newspaper, containing Eighty-four Columns every week. Its News Reports Cover the World, and Its Correspondents and Agents are to be found in Almost Every County in Every State. The Regular Subscription Price of the Weekly Constitution is One Dollar a Year.

THREE GREAT PAPERS=THE NEWS, THE FARM, THE HOME

By the special request of the publishers of The Weekly Constitution we make a clubbing offer of their weekly and our two papers, Farm and Fireside and Woman's Home Companion. They have given us a very low rate on their weekly in order to introduce it into thousands of new homes, hence it is that we can make such big bargain offers. Those who accept any of the offers below can make ONE guess at the Missing Word. You are to supply the word that has been dropped out of this sentence: "I was immediately conscious of the effect which his _____ produced on his companions."

WOMAN'S HOME COMPANION is our dollar-a-year magazine. It is printed on fine paper and profusely illustrated. It gives 32 to 40 pages a month, each page 11 by 16 inches, and a new and beautiful cover every issue. Its editors and contributors are the most popular American writers; in short, it is an ideal family magazine, magnificently illustrated. It now has over 325,000 subscribers. For free sample copy address WOMAN'S HOME COMPANION, Springfield, Ohio. Regular price \$1.00 a year.

\$1.00	We will send Farm and Fireside one year and The Weekly Constitution one year and either ONE of the premiums named below for \$1.00.* * * * *
\$1.25	We will send Woman's Home Companion one year and The Weekly Constitution one year and either ONE of the premiums named below for \$1.25.* * * * *
\$1.50	We will send The Weekly Constitution, Woman's Home Companion, and Farm and Fireside, all three, one year and any TWO of the premiums named below for \$1.50.

The premiums referred to in above offers are the following: "Photographic Panorama of Our New Possessions," "Gleason's Horse Book," "Samantha at Saratoga," "Samantha Among the Brethren," "The People's Atlas," "The Giant Almanac for 1899," "Five Geranium Plants," "Six Tea-Rose Plants," "Popular Edition Universal Dictionary," "Standard Cook Book" and "Pilgrim's Progress."

When any one of the above offers is accepted it may be counted as one name in a FARM AND FIRESIDE Club.

POSTAGE PAID BY US IN EACH CASE

Address All Orders to FARM AND FIRESIDE, Springfield, Ohio

5 Magnificent Geraniums

Premium Number 411

DOUBLE AND SINGLE FLOWERING



THE Geranium is the most popular plant for bedding and house culture. It blooms profusely the year round and always has luxuriant, green foliage. The Geranium is perfectly at home in every part of this country. It withstands hot sun and droughts like a weed. It is so easy to cultivate that every one can grow it, yet in foliage and flower it is splendid. It grows very rapidly and yields a mass of bloom in a short time. (When wanted for winter blooming keep it in a pot and pick off the young buds during the summer.)

The Geranium has been wonderfully improved during the past few years. New colors, new styles and profusely blooming sorts have been developed. The collection here offered includes the latest and best varieties of this popular flower. They are unusually fine year-old plants, well developed, strong and thrifty. All have an abundance of roots.

5 DIFFERENT COLORS, AS FOLLOWS:

One pure snow-white, one splendid crimson-scarlet, one brilliant rose-colored, one rich salmon, one beautiful pink, all of them free bloomers.

ORDER AT ONCE and your plants will be marked with your name and placed in the reserve greenhouse and kept growing. At the right time to set them out, or on any date you may specify, they will be mailed to you.



AN EXTRAORDINARY BARGAIN IN PLANTS

In order to introduce their plants into the homes of the many thousands of flower-loving readers of FARM AND FIRESIDE one of the largest firms of florists in this country (they are located here in our city) offered to furnish us at cost price 25,000 sets each of their choicest Geraniums and Roses for premium use. We accepted their proposition and now make the offers on this page. Neither we nor the florists make one cent of profit on the plants. All we want are the subscriptions and clubs, and the florists will be satisfied with the advertising they get. This explains how we can afford to offer

extraordinarily good bargains in the very best Geranium and Rose plants grown anywhere in America, all of the choicest and expensive varieties. Only the most popular, best-growing and finest-blooming varieties are included in the collections. The same plants will be listed in the florist for 10 to 25 cents each, 50 cents to \$1.00 for a collection of five. (Because we offer the very same plants so much cheaper than their regular price are not allowed to print the catalogue names here.) All of the plants will be large, healthy and well rooted, and will bloom the coming season. We guarantee them to be exactly as described, to arrive in perfect condition, and to give entire satisfaction or money refunded. Send your order at once.

Premium Number 410

6 of the Choicest Ever-blooming Roses

HOW TO GROW.....

Full instructions how to plant and care for them will be sent in each box of plants.

The Rose, as it has been perfected by scientific culture during the past few years, is a marvel of beauty and fragrance. Those who grow Roses at all should have only the latest and best kinds, such as are offered below, especially when they can be had so very cheaply. No finer plants or varieties are grown than these. They will grow in pots or in the garden, and can be left out of doors all winter. All double-flowering.

THE WONDERFUL YELLOW RAMBLER

This Yellow Rambler will withstand, without protection, a continued temperature of from zero to fifteen degrees below, which proves it to be the only hardy yellow climbing rose yet introduced. It can be successfully grown in all the northern parts of the United States and Canada. The flowers are borne in immense clusters, often as many as one hundred and fifty blossoms in a bunch, and the trusses have a handsome pyramidal shape. The color is a decided yellow.

THERE ARE 6 DIFFERENT COLORS AND VARIETIES

The collection of 6 roses includes all of the following colors: One Yellow Rambler Rose as described above, one clear bright rosy red, one bright pink, one delicate creamy white, one rich flesh-colored, one beautiful salmon-colored. All will bloom freely during the coming season.

It is almost certain that we will receive orders for more plants than the florists have agreed to furnish us. Order at once and your plants will be marked with your name and placed in the reserve greenhouse and kept growing. At the right time to set them out, or on any date you may specify, they will be mailed to you. When the supply of plants becomes exhausted money will be refunded.

We will send either the Collection of 5 Geraniums OR 6 Roses, and the Farm and Fireside one year, for **40 Cents**

No more than one collection with one yearly subscription. When the above offer is accepted the name may be counted in a club.

FREE

We will send either the collection of 5 Geraniums OR the collection of 6 Roses FREE for a club of TWO yearly subscribers to Farm and Fireside; or two collections for a club of FOUR; or three collections for a club of SIX, and so on.

NOTE

THIRTY CENTS is the clubbing price for yearly subscriptions to the Farm and Fireside without a premium to the subscriber. But members of clubs may accept any of our premium offers and their names can be counted in clubs. RENEWALS can be counted in clubs.

Postage on the plants paid by us in each case

Address FARM AND FIRESIDE, Springfield, Ohio



Spring Litters of Pigs...

Do you expect them? If you feed the sow *Wilbur's Stock Food* her delivery will be surer and safer and the pigs healthier. The food then fed will keep sow and pigs from disease and mixed with grain will fatten them for market better than anything else. F. B. Henry of Culbertson, Md., says:

"It is the best Food for hogs to be found. We are not able to recognize them as the same after two weeks' feeding."

If your feed dealer, harness maker, grocer or druggist doesn't keep it send 50 cents for a package containing 40 feeds and sample of White Rock Hoof Packing. Our booklet, "Pasture in Packages," tells how you can give your animal the benefit of pasture and at the same time keep him working or in the stable, tells how to keep up the cow's flow of milk, fatten the steers or hogs and save grain in feeding the animal.

Wilbur Stock Food Co.

189 2d Street, MILWAUKEE, WISCONSIN.



ALFRED PEATS

1899 PRIZE

WALL PAPER

Samples Mailed Free New Floral, Chintz, Damask, Denim, Stripe effects, etc., etc., 5 cents to 10 cents per roll. Beautiful and high-class Tapestries, Louis XIV., Empire, Braintree, Moorish, Rococo, Colonial, Embossed Leather, the New Greens and Reds, Fine Satin effects, etc., etc., at 10 cents, 12½ cents, 15 cents, and up to 50 cents per roll. These superior papers can only be bought from us or our agents. One price everywhere, and

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An Agent Wanted in every town to sell on commission from our large sample-books, showing hundreds of beautiful patterns. We furnish free, handsome advertising signs, illustrated circulars, and refer customers to our agents, who write us for samples. The business pays from the start, for no local dealer can carry one tenth the variety of designs and colorings, or sell as cheap. A pleasant and profitable business, requiring no capital or experience. Over 9,000 agents are now selling our papers every year.

For samples or particulars about the agency, write to nearest address.

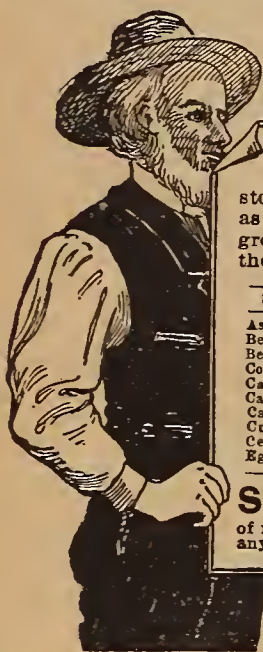
We will give \$1,000 in cash prizes for the five best wall paper designs. Contest closes July 1, 1899. Book of instructions and full particulars can be obtained of our agents.



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A GARDENER'S GUIDE

Large crops are easy of attainment with our 1899 catalogue. A valuable guide to good gardening and farming. Every page a storehouse of scientific information and suggestion to the amateur as well as professional planter. The result of 115 years of seed growing and experience concentrated in its pages—yours free for the asking. Full details concerning the following:

Seeds	Seeds	Trees	Vines	Plants	Shrubs	Bulbs	Machinery
Asparagus	Lettuce	Apricot	Grape	Ferns	Roses	Hyacinth	Incubators
Best	Onion	Apple	Blackberry	Palms	Chrysanthemum	Tulip	Brooders
Beans	Oats	Pear	Dewberry	Rubber	Hydrangeas	Crocus	Seed Drills
Carrot	Peas	Quince	Raspberry	Crotons	Azalia	Lily	Lawn Mowers
Cauliflower	Parsley	Plum	Strawberry	Japanese	Paeony	Dahlia	Wheel Hoes
Cucumber	Potatoes	Cherry	Current	Dwarfs	Jasmine	Taberose	Cultivators
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Egg Plant	Tomato	Chestnut	Cranberry	Sotetan	Begonias	Glaadiolus	Sprayers
		Walnut		Salvias	Clematis		Fumigators

SPECIAL In order to get the name and address of every grower of seeds in the country, we will mail five distinct packets of named Sweet Peas, (retailing at 5c. each), and our beautiful Catalogue to any address on receipt of 10 cents.

D. LANDRETH & SONS, 21 and 23 S. Sixth Street, PHILADELPHIA.
Largest Dealers in Farm Seeds.

FREE PIANOS OR ORGANS One Year's Trial

All freight paid by us if not satisfactory

OVER 50 STYLES TO SELECT FROM
No money in advance. Safe delivery at your depot insured. Installments. Easy payments. Our new 1899 Catalogue shows it all. Send for it today. Our Catalogue shows you how to get a Don't buy elsewhere until you have seen our Premium Book. Organs from \$25.00 up. Pianos from \$155.00 up. Our new 1899 Coupon entitles you to deduct \$10.00 from the price of any Organ, or \$20.00 from any Piano. We give more for the money than any Company in the World. You can prove it by sending a postal card for the largest and best Catalogue in the world. Our Motto:



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In the neighborhood this year will be yours—if you plant **Maule's Seeds**. My new Seed and Plant Book for 1899 contains everything good, old or new. Hundreds of illustrations; four colored plates; complete up-to-date cultural directions. Full of business cover to cover. A 600 page Year Book and Almanac with complete weather forecasts for 1899, free with every order of \$1.50 or upward for

Maule's Seeds

I send the best Agricultural Weekly in the U. S. for only 25 cents per annum. Ten packets of the newest novelties in Sweet Peas, only 20 cents. It also gives rock bottom prices on the best Onion Seed in America. It is pronounced by all the brightest and best seed book of the year, and you need it before placing your order for 1899. Mailed free to all who mention having seen this advertisement in the FARM AND FIRESIDE

WM. HENRY MAULE, 1711 Filbert St., Philadelphia, Pa.



A Harness Shop Free

We will send the Harness Shop free for a club of 15 yearly subscribers to Farm and Fireside; or for a club of 9 subscribers and \$1 cash.

SATISFACTION GUARANTEED OR YOUR MONEY REFUNDED

Johnson's Portable Harness Shop consists of 1 Saddlers' Stitching-horse, the seat of which is a Varnished Hard-wood Chest 18 by 8 by 5 inches, with solid oak lid; 1 Strong, Heavy Clamp, neatly japanned, with polished jaws; 1 Steel Harness-knife; 1 Adjustable Sewing-awl Handle, with wrench; 1 Bent Sewing-awl; 1 Straight Sewing-awl; 1 Three-cornered Saw-file; 6 Imported Harness-needles; 1 Ball of Harness-thread; 1 Ball of Wax; 100 Bifurcated Rivets, with set. When not in use the clamp can be removed from the socket and the entire Harness Shop closed up in the box. Weight 12 pounds.

We send this Harness Shop, express prepaid, as specified in the shipping directions below.

THOUSANDS ARE USED IN U. S. ARMY

Everything about this Harness Shop is guaranteed to be of first-class material. The deep iron socket in the lid holds the clamp solid and in correct position for either a right or left handed man as desired. The clamp is 14 inches long and the polished jaws 3½ inches wide. Thousands of these shops were sold to the U. S. army during the war with Spain.

We send the Shop complete, and Farm and Fireside one year, for **\$2.50**

SHIPPING DIRECTIONS The Harness Shop will be sent charges PAID to any express office in Minnesota, Iowa, Missouri, Tennessee and Mississippi, and to all states EAST of these, except Florida. For 50 cents extra the shop will be sent by prepaid express to Florida, Louisiana, Texas, Arkansas, Indian Territory, Kansas, Nebraska and the Dakotas. To other Western states the charges must be paid by the receiver.

FARM AND FIRESIDE
Springfield, Ohio





4

of the best ever-blooming

ROSES for 10c

4 Roses—Red, White, Pink and Yellow, all of the newer varieties for 10c
4 Fuchsias—All different, double and single, beautiful shades for 10c
4 Carnations—White, Red, Pink, Yellow, the most fragrant for 10c
4 Pansies—From McGregor's new mammoth prize kinds for 10c
4 Chrysanthemums—Latest and best, beautiful shades of the four colors for 10c
4 Geraniums—Double & single the best all-round bedders & bloomers for 10c

24 Plants The above six collections, making 24 plants, sent postpaid to your address for **50c**

Our beautiful new catalogue for 1899 FREE TO ALL. Send for it.

McGREGOR BROTHERS, Springfield, Ohio.

GET THE BEST.

Buy your Strawberry Plants of W. F. Allen, Jr., who undoubtedly has the largest stock and finest selection of vigorous, healthy plants in the world. This stock is of his own growing and he knows that it is pure. HE GROWS ALL THE PLANTS THAT HE SELLS and they are all fresh dug at the time of shipment. No cellar-stored, reshipped and repacked stock. 32-page illustrated and descriptive catalogue free. Address

W. F. ALLEN, JR., BOX 21, SALISBURY, MD.



VOL. XXII. NO. 12

EASTERN
EDITION

MARCH 15, 1899

Entered at the Post-office at Springfield,
Ohio, as second-class mail matter

TERMS 50 CENTS A YEAR
24 NUMBERS

PRIMITIVE FARMING IN NEW MEXICO

BY MRS. TANNATT WOODS

NEW MEXICO is peculiar, captivating, primitive and restful. No one is in a hurry, no one seems to need anything except water for irrigating purposes, and life in summer is delightful.

In the charming city of Santa Fe the government officials form quite a little colony, and the administration buildings give an air of business to an otherwise sleepy Mexican-American town.

The farmers in and around the so-called "city" still adhere to the old-time scriptural or Indian methods of agriculture. Some of the most successful farmers are found among the Indians at the various pueblos. They still "tickle the soil" with quaint wooden plows, and raise their crops by careful irrigation. The "asequia madre," or mother-ditch, supplies the water to all farmers, but each one must pay his full share for the water, and must also come under the rules laid down by the "master of ditches." It has been said that favoritism is not unknown, and the farmer with a political pull can sometimes get water when others cannot. Any observer can see the farmers working hard when the water is on, to make the most of their small crops.

The fruit raised in New Mexico is fine in flavor and rich in color. Even the famous Delaware peaches are inferior to the sun-kissed and luscious ones raised on ranches near Santa Fe. Apricots, plums, apples, pears and all the small fruits have a flavor unknown to the same varieties in California.

Primitive customs still obtain not only among the Indian farmers, but the Mexicans. The Indian woman still uses her "metate," or stone mill, for grinding her corn, and she

winnows the grain by standing on the roof of her adobe house and pouring it from an earthen bowl upon a blanket or cloth spread upon the roof. The Mexicans thresh their grain with herds of goats, who literally "tread out the corn" or wheat. The process is most peculiar and interesting, but far from hygienic. Three or four of the farmers unite and clear a round space on the ground,

to determine how the grain was divided among the respective owners. One of our wise government officials endeavored to overcome this condition of affairs, and secured for some of the farmers a threshing-machine; but it was soon discarded for the old method of treading out the grain.

Some of the Mexican families use the "metate," or stone mills, both for grain and

burros. The meditative air of the burro in the illustration entitled "Three of a Kind" gives him a certain superiority over his riders. These Mexican boys have been to market, and are now on their way home, stopping, of course, at the post-office for the mail. They are in no hurry—no one hurries in New Mexico—"manana," to-morrow, and "poco tiempo," pretty soon, rule the hour.

So these boys, being Mexicans, and boys also, will go to the old palace where the post-office is located, and will there dismount. They will not fasten professor burro with the rope which has bound the faggots upon his back; they will at once take the coat worn by the rear rider and throw it over the dignified head of their steed, and he will stand there pensively for hours, while the boys go into the plaza and frolic with friends or eat their simple luncheon. When the shadows begin to fall the lads

will remove the coat and start for the ranch, happy in their innocence of all fear.

Sometimes the boys who call for the mail have a small rope hanging from the bag which they have used for a saddle. This rope, often a mere bit of twine, is knotted for a stirrup, and when the lad dismounts he raises the right foot of the burro and puts it into this odd stirrup. I have seen a poor burro stand thus on three legs until it has been painful to think of the suffering and stiffness which he must have endured; and yet the moment he is released he ambles away without either food or drink, and seems to be pondering on the great issues of life as he passes your window.

The farmer boys of New Mexico must be brave as well as hardy, for mere lads are sent out on the mountains to take care of large herds of sheep, and their only weapon seems to be a small stick, and their only companion a poor, half-starved-looking shepherd-dog.



THRESHING WITH GOATS

usually on the top of a knoll; here they bring the grain, and stack it in the center of the space. The herder men and boys then drive up a flock of goats, big and little, and make them walk around and around, as seen in the illustration, by means of much driving, shouting, waving of old rags, and the barking of dogs. Now and then a daring "billy" mounts high up on the stack and obtains a generous nibble. It is a most amusing scene, especially when a refractory goat runs away and is chased by the boys in order to bring him back to his duty. When the grain is thus trampled out the goats take a recess, and one or two men winnow it, by lifting it on shovels and letting it fall to the ground; unlike the squaws, they have not even a blanket under it, and the wind of heaven gives it all the cleaning it gets. After this imperfect winnowing the grain is placed in piles upon the ground, and later on is put into bags. After several visits to these strange threshing-floors I was unable

grinding coffee, precisely as the Indians do.

The quaint adobe ovens near every Mexican and Indian house amuse most visitors, as they are sometimes used for chicken-houses also. The Mexican women of the better class make excellent bread, and a favorite luncheon of the herders upon the mountains is this wheat bread, with generous slices of "queso de cabra," or goat's cheese. The cheese is usually a rich curd.

The Mexican farmer brings his wood to market chiefly on the backs of the small and patient burros, who deserve to be called "New Mexican philosophers," although travelers have named them "New Mexican canaries," from their harsh and discordant call. These little creatures can endure more than any horse, eat far less, and are patient and enduring. Now and then a farmer comes to town with a wood-cart which deserves a place among American curios. The illustration represents one, and also shows the reflective and wise expression of the



THREE OF A KIND.



MEXICAN WOOD-CART

FARM AND FIRESIDE

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SECRETARY WILSON delivered an address at the Interstate Farmers' Institute, held at Vicksburg, Miss., February 9th, which contained many practical suggestions of special value to Southern farmers. In calling attention to the reprehensible practice of selling off the farm the entire product of the cotton-fields he said: "If nothing were sold from the soil but the fiber of the cotton, and a system of rotation were practised, the soil would not very rapidly become unproductive, provided the more nitrogenous part of the plant—the seed—was returned to the soil regularly. But this has not been the case, and farmers who have been growing cotton, and selling to other countries and to other states the nitrogenous part of the cotton-plant—the seed—will have to learn by experience that the practice cannot be continued indefinitely. Evidently the time has now come when the Southern farmer must adopt such systems of rotation as will afford the necessary plant-food required for the more exacting crops."

Referring to the development of the dairy industry, and of the necessity of making such products as will best meet the requirements of the markets in the West Indies, the China seas and South America, he said: "If we are to send butter to the tropics, we must see to it that it is so made to meet the climatic conditions as thoroughly as butter made anywhere else. Experiment along this line has developed the fact that butter made where sugar-beet pulp was an essential constituent of the ration of the cows was harder, stood up better, and had more stearine in it than butter made from more carbonaceous rations."

Secretary Wilson also referred to the work of the Department of Agriculture in introducing seeds and plants obtained in foreign countries that are likely to prove valuable here when grown in the life zones where exist climatic conditions similar to those found in the localities from which such seeds and plants were obtained. In this connection he spoke of the receipt by the Department of Agriculture of ten tons of lowland rice from Japan, which is believed to be superior to any variety now cultivated in the United States. Reference was also made

to the purchase and dissemination of some greatly improved varieties of pedigreed sorghum-seed; such, in fact, contain a larger per cent of saccharine matter than those commonly grown. After remarking upon the necessity of an increased supply of nitrogenous matter as food for beef and dairy stock in the Southern states, he said that it had occurred to him that the carbonaceous matter so much needed to balance the cotton-seed ration might be found in the bagasse of the sorghum-plant after the saccharine matter had been extracted; or it might be found in the sorghum-plant entire without extracting the sugar or syrup content.

Referring to recent work of the Bureau of Animal Industry he said that it had been engaged in making a careful chemical examination of all the meats of commerce with the view of ascertaining the facts relative to the charges made as to their unwholesomeness. The result was an utter failure to find any evidence whatever of the use of chemicals. If, in the future, further examination should reveal the use of chemicals, either in canned or refrigerated meats designed for home use or for export, the fact will not only be promptly announced in the publications of the Department of Agriculture, but they will also be translated into all the languages of Europe and spread broadcast in the countries of Europe, let it strike where it may.

Discussing the sheep industry, more particularly mutton production, he said: "The public taste for good mutton is growing. The South can produce early lambs at less expense than the North can. The Southern farmer can, with great profit, engage in this industry after he has secured good pasture. Cheap grain and cheap grass form the basis for profitable dairying and mutton and poultry production. We have these things in the United States, and we can enlarge our own supply to meet our own and foreign requirements."

"The poultry interests," he said, "require more attention. Every farmer can have, and should have, a full complement of poultry. The market never has enough Pekin ducks. Turkeys always sell well, and when the market of the United States is oversupplied cold storage will take the product to the other side of the Atlantic or Pacific ocean."

In conclusion he said: "I earnestly advise the Southern farmer to now turn his attention to the industries that will make his land a little better each year, instead of making it poorer. There is no reason why the South should not produce all the grain and forage it needs, and have money crops along the lines I have suggested. This diversification of farm-work will bring money to the farm from consumers in our large cities. It will create a demand for farm literature and become an educational process that will lead along over pleasant paths to more productive fields, better farm conveniences, more comfortable houses, and higher ideals of life."

In his Home-Market Club address President McKinley said:

"Our concern was not for territory or trade or empire, but for the people whose interests and destiny, without our willing it, had been put in our hands. It was with this feeling that from the first day to the last not one word or line went from the executive in Washington to our military and naval commanders at Manila, or to our peace commissioners at Paris, that did not put as the sole purpose to be kept in mind first after the success of our arms and the maintenance of our own honor, the welfare and happiness and the rights of the inhabitants of the Philippine islands."

This wise policy gives the largest opportunity possible for trade expansion, although our concern was not for trade. Trade follows the flag. The more securely our flag guards the welfare and the happiness and the rights of the Filipinos the greater our trade expansion in the Orient.

In a recent address before the Marquette Club, of Chicago, Mr. Whitelaw Reid said that the American peace commissioners "neither neglected nor feared the duty of caring for the material interests of their own country—the duty of grasping the enormous possibilities upon which we had

stumbled, for sharing in the awakening and development of the farthest East. That way lies the best hope of American commerce. There you command a natural rather than an artificial trade—a trade which pushes itself instead of needing to be pushed. The Pacific ocean is in our hands now. Practically we own more than half the coast on this side, dominate the rest, and have midway stations in the Sandwich and Aleutian islands. To extend now the authority of the United States over the great Philippines archipelago is to fence in the China sea and secure an almost equally commanding position on the other side of the Pacific—doubling our control of it and of the fabulous trade the twentieth century will see it bear. Do you know of any other civilized nation of the first or even the second class that wouldn't jump at the option on the Philippines? Ask Russia. Ask Germany. Ask Japan. Ask England or France. Ask little Belgium! Yet what one of them, unless it be Japan, has any conceivable interest in the Philippines to be compared with that of the mighty republic which now commands the one side of the Pacific? And we are asked to lose all this through a mushy sentimentality.

"Resist the crazy extension of the doctrine that government derives its just powers from the consent of the governed, to an extreme never imagined by the men who framed it, and never for one moment acted upon in their own practice. Why should we force Jefferson's language to a meaning Jefferson himself never gave in dealing with the people of Louisiana, or Jackson in dealing with those of South Carolina, or Abraham Lincoln with the seceding states, or any responsible states of the country at any period in dealing with the Indians or New Mexicans or Californians or Russians? What have the Tagalos done for us, that we should treat them better and put them on a higher plane than any of these?"

"If there is real reason to fear that the American people cannot restrain themselves from throwing open the doors of our Senate and House of Representatives to such sister states as Luzon or the Visayas, or the Sandwich islands, or Porto Rico, or even Cuba, then the sooner we beg some civilized nation, with more common sense and less sentimentality and gush, to take them off our hands the better. If we are unequal to a manly and intelligent discharge of the responsibilities the war has entailed, then let us confess our unworthiness, and beg Japan to assume the duties of a civilized Christian state toward the Philippines, while England can extend the same relief to us in Cuba and Porto Rico. But having thus ignominiously shirked the position demanded by our belligerency and our success, let us never again presume to take a place among the self-respecting and responsible nations of the earth that can ever lay us liable to another such task. If called to it, let us at the outset admit our unfitness, withdraw within our own borders, and leave these larger duties of the world to less incapable races or less craven rulers."

REVIEWING legislation by states in 1898 on suffrage the "State Library Bulletin," University of the State of New York, says: "The movement to place on a more satisfactory basis the existing 'white supremacy' through the black belt of the South has made considerable progress during the past year. In 1890 Mississippi adopted an educational qualification for the suffrage which went into effect January 1, 1898. Provision, however, was made for the granting of the franchise permanently (so far as this qualification was concerned) to persons who should register prior to 1898 and show themselves able either to read a section of the constitution or to understand and explain it when read."

"The new constitution of Louisiana is a much more radical movement in the same direction. An amendment providing for an alternative educational or property qualification was rejected by the people in 1896. The new constitution, however, provides such a qualification with a certain unique condition. The acknowledged aim has been to secure as nearly as possible the disfranchisement of the negro while retaining universal manhood suffrage for the white race. About one fifth of the native whites in Louisiana are illiterate. Some scheme seemed desirable to avoid the disfranchisement of this large number of white voters. The constitution provides that no person of foreign birth naturalized prior to January 1, 1898, and no person who was entitled to vote in any state

prior to January 1, 1867, and no son or grandson of such person, twenty-one years of age at the time of the adoption of the constitution, shall be denied the right to vote because of failure to possess the educational or property qualification, provided he registers before September 1, 1898. The constitution, therefore, virtually establishes an alternative educational or property qualification for all negroes, but for those whites only who did not at the time of the adoption of the constitution possess the franchise. The example set by Mississippi, South Carolina and Louisiana seems likely to be followed during the present year by Alabama, the legislature at present in session having provided for the submission of the question of holding a constitutional convention to the people."

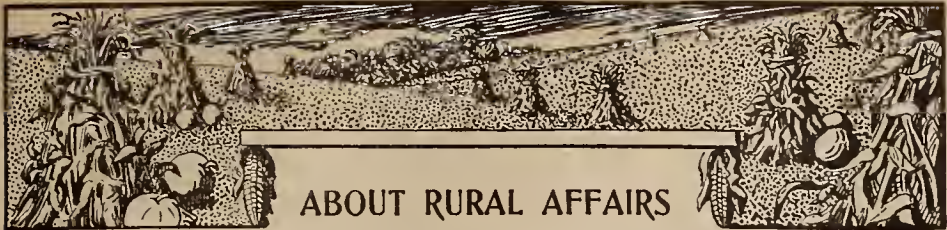
AN Ohio correspondent of the "Rural New-Yorker" gives an interesting account of the recent trial and conviction of a manufacturer of bogus maple syrup for violation of the Ohio pure-food laws. "The testimony," he says, "brought out by the state as to the process and methods of manufacturing this compound were interesting in the extreme, as it brought to light facts that the consumer has a right to know concerning what he is eating, but which are usually denied him. A witness, summoned by the state, and who was employed in the factory for several weeks, testified as to the process of manufacturing this spurious maple syrup substantially as follows: Several large copper kettles were partly filled with water. Into these kettles of water were put a quantity of maple chips, hewn to the size of a spool or thereabouts, and a considerable quantity of pigskin. This mixture of chips, pigskin and water was then boiled for a time, and skimmed occasionally. The resulting liquor, or decoction, was then filtered. This product was then considered to be the flavoring principle of true maple syrup, and was mixed with the syrup of granulated sugar, and put up in cans bearing tasty-looking labels asserting that the contents were pure maple syrup; and adding, by way of information to a confiding public, that all the objectionable features of the old kettle process of making maple-syrup were eliminated."

The defense admitted the correctness of this testimony, but made a legal fight on the ground that the defendant's product was a synthetic compound of the same composition as the genuine article, and therefore entitled to be labeled and sold as such. The defense failed, as it should have failed, but its contention illustrates the astonishing impudence and unscrupulousness of adulterators and counterfeiters of food products before courts, juries and the public. Boiled pigskin and maple chips! Think of the unmitigated gall that publicly defends a dirty imitation of the delicious flavor of pure maple syrup.

THE Ohio Agricultural Student Union was started in 1894. The object of this organization is, first, to bring together the alumni and ex-students of the college of agriculture of the Ohio State University, for the purpose of carrying on co-operative experiments over the state in conjunction with the experiment station at Wooster. This co-operative work brings the farmers of different localities in closer touch with the station, and serves to increase the benefits of that institution to them.

THE opening up of foreign markets for American products is the order of the day. No product of merit that will stand transportation is unworthy of attention. Foreign markets for a number of minor products are of as great importance as the extension of trade in some one staple product. In a recent letter Mr. Gregory, the veteran Massachusetts seedsman, says: "What ails the squash market? To ask the question is to answer it; it is oversupplied, the supply being greater than the demand. There is just one way to relieve it—enlarge it. This can be done by opening a foreign market. Great Britain knows nothing about squashes; she cannot raise them, and they are never found for sale in her market. After thorough discussion of the matter the Boston Market Gardeners' Association has petitioned the Secretary of Agriculture for the end."

The Department of Agriculture is petitioned to send an agent, well skilled in preparing squashes for table use, next August, to introduce them into the countries of Europe.



ABOUT RURAL AFFAIRS

Higher Living It is undoubtedly true that if farmers of to-day would live as the farmer of fifty years ago was forced or satisfied to live he could make a living on and from the farm just as well as (or better than) his predecessors did then; that is, he might be a good deal of a machine or beast of burden, and very little of the thinker and manager that he is to-day, or should be. It seems to me that every human being is entitled to participate in the advantages of the progress that the world has made during all these years. As Mr. Agee says ("National Stockman"): "We harness steam and electricity to wonderful machinery in order that a human being may be enabled to clothe himself comfortably and to provide nourishing food for himself with fewer hours of labor. The hours that he thus gains are naturally spent in procuring other things that are essential to a much higher standard of living—to the standard of the present day." It may be true, too, that the farmer of to-day frequently indulges in extravagances and luxuries which are far beyond the safety-line and unwarranted by his own station in life and existing conditions. It is true that he frequently shows a disregard for small things and savings, which is decidedly unwise and dangerous. But while the present farmer should return to the older ways of saving all odds and ends, and of carefully avoiding every waste, no matter how small, it cannot be expected of him to go altogether back to the ways of living, clothing and working that prevailed a half-century ago. Useless luxuries must be dispensed with; but it should be recognized that the farmer of to-day stands on a higher plane than he did fifty years ago, and that he must live accordingly.

A Cheering Prediction "If farmers," says one of my exchanges (credit lost), "have not made the same progress as other classes; if farm life and labor have not experienced the same degree of elevation as the life and labor of other classes, the fault lies, I think, not with these other classes, nor, as often thought, with the farmers themselves, but with circumstances over which no class has much control. The extension and cheapening of transportation—a great good in itself—has introduced in the agriculture of the older and more advanced countries a degree of competition unprecedented and undreamed of fifty years ago. The world has not yet fully adjusted itself to the new conditions, and until it does there will be more or less suffering. But it is coming. The next few years, it is likely, will witness a great change in agricultural conditions, and an unprecedented increase in the demand for agricultural produce. We are on the verge of a new era."

It is never safe to make predictions too confidently. But I do believe that present conditions justify us in taking a more cheerful and hopeful view of the situation than was thought possible only a few years ago. Production of agricultural things has seemingly reached its zenith, and will fall off rather than increase. Low prices and low spirits, and often utter hopelessness in the producer, has discouraged planting, sowing and any extension of operations among soil-tillers. At the same time the population is still rapidly increasing, and the consumption of finer soil products becoming more general among all classes. Thus the conditions are changing in two or three directions in favor of the American farmer. Let us be of good cheer!

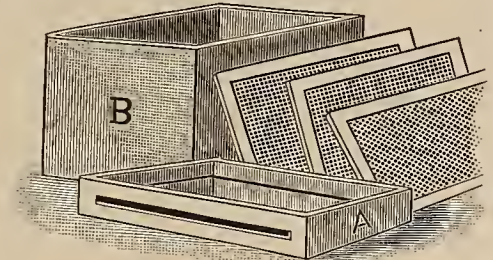
Tree-peddler Frauds The Ohio Experiment Station has recently had so many letters from all parts of the state relating extravagant claims made by tree-dealers that it was thought best to issue a newspaper bulletin warning against the wiles of these fruit-tree swindlers. It is wonderful what plausible tales the itinerant fraternity does invent, and perhaps still more wonderful that so many otherwise intelligent farmers will be caught by their stories. Some of these sharks claim that their peach-trees are yellows-proof; they claim extra hardiness for their stock for various reasons. Of course, these trees of extra qualities cannot be sold cheap. Peach-trees are offered at fifty cents each, or five times their real value. Says this station

bulletin: "Reliable nurserymen take all reasonable precautions not to propagate peach-trees from those having the yellows, nor to use suspected seed, but it will be news to all of the horticultural fraternity that Canadian or French seed is free from the disease, or that trees grown from it are proof against the contagion. Yellows is present in Wayne county, and over the greater portion of the state, and the fact is well known that in sections where the disease is present any peach-tree, no matter where it came from, is liable to be attacked by it. There is no such thing known as a peach-tree which is resistant to the disease. All may not take it, but all are subject to it.

"It seems strange that an Ohio man should discover virtues in Canada peach-seed of which the Canadians themselves are ignorant. The peach-growers across the line are plodding along as those on this side, not knowing of the existence of that wonderful, slow-growing, late-blooming variety which cannot be sold at common prices because it requires twice the usual time under the fostering care of the nurseryman!"

I can only repeat what I have so often stated before: The safest and cheapest way to get reliable trees, shrubs, plants or seeds is to deal directly with a responsible nurseryman or seedsman. You can trust your neighbor who makes up a club order so long as you know that the party he deals with is one of the old-established firms of the country, tried and found true; but do not trust every stranger that comes to your house, especially if he has a big stock of wonderful tales to tell.

Sieves On the Farm For many years there was one thing that I greatly missed in my household and on the farm; namely, a set of good sieves of various sizes of mesh. Occasions for using sieves presented themselves pretty often, especially when I wanted to clean seeds, such as beans, peas, grains, sunflowers, etc., also various garden seeds. For years I looked through the hardware-stores near me in quest of a complete set without finding what I wanted, and finally I made up my mind to look for the coveted article, or at least for wire screen of various sizes of



mesh, on my next visit to a larger city. At present I think even the greater part of the country hardware-stores keep wire screen of various sizes in stock; but if they do not they should. Indeed, I believe that sets or nests of sieves would find ready sale if kept at these hardware-stores for sale at a reasonable price. The New York "Tribune" recently pictured a home-made set of sieves of this kind. It consists of a box-like framework (A) having a slit in one side and a groove around the inside. Light frames are strung with mesh of various degrees of openness. As wanted, one or another of these sieves is slipped into the groove, thus making a sieve of the right sort. Then have a box (B) of corresponding size so that the other (A) will slide back and forth over the top. I have a set of such sieves in the greenhouse, and there use it almost daily for sifting sand, potting-soil, etc.

On a former occasion I mentioned and illustrated a drum-sieve that I use for cleaning my Barletta pickling-onions. A sieve of this kind is also easily made, and it comes very handy for many purposes. Of course, it is rather coarse, there being only three meshes to the inch, but it sifts potting-soil and soil for the greenhouse bench very nicely. I have still coarser sieves for that purpose, however. I do not care to have the soil sifted too fine, except just a thin layer, say an inch deep on the surface, in which to sow the seeds. This soil is very light and fibrous, consisting largely of vegetable mold, and is sifted through a sieve having six or eight meshes to the inch. I also have a coal-ash sieve, being an upright box with a hopper,

and a slanting sieve having two and one half meshes to the inch. This is used for no other purpose, however. The coarse cinders, etc., go for filling in sag-holes in the road and anywhere on the premises, for making paths, etc., while the sifted ashes are mostly used as absorbent material in the poultry-house, in the earth closet-box, etc.

Prof. Roberts and the Sparrow "Keep two or three good boys shooting at sparrows," is Prof. Roberts' advice. I was sorry to hear him say it. We can get along with the sparrows here much easier than it is to keep our boys out of mischief. I fear the boys with shot-guns. Boys run all over the country, shooting right and left at anything that wears feathers, except women's hats. It is a pity. And then we hear the complaint that our song-birds are getting scarcer every year, and at the same time that our insect enemies are multiplying. If we give a little more encouragement to the boy hunters, a bird will soon be as rare as a butterfly in winter. The remedy proposed by Prof. Roberts may be good for the people that are bothered by sparrows, but it is very bad for the boys. It makes bird murderers and soulless wretches of them. They begin with the sparrow, but they kill every living creature that comes before their gun. Let us not encourage such practices, even if they do result in the superiority of American marksman and in the admiration of other nations for the American "man behind the gun."

The Artichokes The various seed catalogues offer the Jerusalem artichoke. I am anxious to discover what, if any, real difference there is among the so-called wild tuberous-rooted, or Jerusalem, artichoke and the various so-called improvements, as the Mammoth French, etc. I have the latter. It propagates itself easily from tubers or pieces of tuber left in the ground in gathering the crop. I think this vegetable is surely valuable in its place. It makes excellent stock food, and is very prolific. I find that some of the catalogues talk about a yield of 300 to 400 bushels to the acre. From the way the artichoke yields on my ground I think it easy enough to grow 1,000 bushels to the acre. T. GREINER.

SALIENT FARM NOTES

Seed-corn It is very plain that the seed-corn question is going to be a serious one this spring. Several careful farmers have informed me that they have tested the corn they saved for seed and have found that about ten per cent of it fails to germinate, while a still larger per cent sends out a shoot too weak to make a good plant under the conditions ordinarily found in the fields.

No one need be surprised if more than half the corn usually relied upon for seed should be found deficient in vitality. The peculiar atmospheric conditions prevailing last autumn made this inevitable. Only corn that was planted early on well-drained, naturally warm soil fully matured before frost. And we know well enough that unmaturing corn is worthless for seed.

I find many farmers who think seed-corn is all right if it will sprout when placed in damp moss or cotton and kept in a warm place. This, however, is not a fair test—not the test it will undergo in the cold soil. Many a grain that will germinate in a hot-bed or under the stove will rot if planted in the field. In testing seed-corn one should strive to place it under conditions similar to those likely to be met with in the open field.

"Testing seed-corn," said an expert farmer, "is on a par with proving your own statements. Neither should be necessary. If the farmer will pick out his seed-corn before ground freezes, and then place it where the cob will become thoroughly dry before hard freezing weather sets in, he will have no trouble whatever with it. Every grain will germinate and make a strong plant if the soil in which it is planted is properly prepared. No farmer who is striving to be successful will ever have to plant doubtful seed-corn, because he will not fail to gather it at the proper time and to keep it where its germinating qualities will not be impaired."

One of the best corn-growers I ever knew—a man who had grown twenty-one good crops in succession, said to me: "I would rather pay five dollars a bushel for seed-corn that is thoroughly sound and alive than to accept as a gift that which is in the least doubtful. When you have sound seed you

know how to plant it and what to expect; when the seed is doubtful you don't know what sort of a stand you are going to get. If you fail to get a good stand you will surely fail to get a good crop."

Unless the conditions this spring are very favorable for germination and growth thousands of farmers will not secure more than a half stand of corn, because the seed they will plant is weak. A half stand will mean a half crop, and this half crop will cost them just as much as a full crop.

There is plenty of good sound seed-corn in the country, and it can be bought at reasonable rates, so there is really no necessity for planting seed that is weak or doubtful, and none should do it.

In FARM AND FIRESIDE of February 15th an Indiana farmer advertised a white corn for seed. I sent for and tested a sample of it and found its germinating qualities good, while the ear and grain indicated that the variety is a very desirable one to plant.

Advertise Superior Varieties And this brings me to another matter. When a farmer has a surplus of any really first-class stock, or a variety of grain that is superior to those commonly planted, he should advertise it in one or more agricultural papers. There are thousands of farmers all over this broad land who desire a better quality of stock or grain than they now have, but they do not know where to procure them.

I have known men who were careful, painstaking breeders of some kind of live stock to sell their surplus to a professional breeder and regular advertiser at a small advance over market prices, who sold this stock as his own for double and quadruple the price he paid for it. I have known other men who by years of careful selection and growing succeeded in so improving a variety of grain that it would outyield the ordinary sorts forty to fifty per cent, yet who sold their surplus to the grain buyer at market price.

On the other hand, I know a farmer living in Iowa who discovered that a neighbor had obtained a variety of oats that yielded double the quantity to the acre that the ordinary sorts did. He quietly contracted for one hundred bushels, and the following year sowed them on the best part of his farm. When they were ripe he cut several sheaves, bound them carefully, and put them in an upper room in his house safe from rats and mice. The crop was threshed and stored in his granary and crib. Then he began to advertise them. The sheaves, together with liberal samples, were tastefully decorated and exhibited at several leading county fairs with large placards attached giving date of sowing, date of harvesting, and yield. Naturally he captured all premiums on oats, and he sold quite a lot of them at one dollar a bushel. Then he advertised them in two agricultural journals, and before spring sold all he had, and all his neighbor could spare, besides.

That one crop of oats lifted an \$1,800 mortgage off his farm and built him a nice barn and much needed addition to his house. If one has a really meritorious article—one that is superior to others of its kind—he should let people know it. That's what the advertising columns of all journals are for. If more live farmers—the men who raise the very best of everything—would do this more frequently they would not only benefit themselves but also thousands of others who would like to raise larger crops, a better quality of grain and better stock.

The advertising columns of all journals are designed to bring seller and buyer together. The one simply states what he has to sell, and the other can buy or not as he pleases. The man who neglects to look over the advertising columns of his paper occasionally misses one third of its value. Three years ago a neighbor of mine wanted a certain kind of an implement. He applied to the dealer in town, who said he would get him one, and did so. Another neighbor saw it and said to him, "What did you buy an old, out-of-date, way-back thing like that for? Why didn't you get a good one, like mine?" "I didn't know there was any other kind made."

"Why, there's three or four been advertised for nearly a year in that paper you take. Any one of them is worth fifty such out-of-date things as that."

"Is that so! I never noticed them—in fact, I never look at the advertisements."

"Well," said the other, sarcastically, "that's why you got soaked!"

FRED GRUNDY.

OUR FARM

FARM THEORY AND PRACTICE

RYE SOD.—Some of our farm papers are discussing the value of a rye sod, a few correspondents having poor results from its use, while others are strong advocates of rye as a manurial crop. I have been growing rye as a winter cover crop for many years, plowing it under at different stages of growth, and can easily understand how farmers may differ widely in their estimates of its value. The objects in view when using rye as a crop for green manuring are these: First, to give the soil a cover, because a mulch of any sort adds to the fertility; second, to prevent leaching, the roots going down into the soil and picking up the soluble plant-food; third, to release tough plant-food in the soil; fourth, to dry wet soils by pumping out the excess of water in late spring; fifth, to make the soil more friable; sixth, to add to the content of organic material.

HOW INJURY MAY RESULT.—Rye is a hardy plant, growing in the warm days of winter and the early days of spring, and springs up ready for heading early in the season. If it is left until nearly headed out before the crop is turned under, an immense amount of water is pumped out of the soil by the growing plants, and in a dry season there may not be enough moisture left in the ground to start the summer crop well. More than this, the rye-stalks become slightly woody, and lying in the bottom of the furrow they hold the top soil away from the subsoil and shut off the rise of moisture from below. In this way the chances for a good summer crop may be ruined. The roots of the plants hold some dry soil around them, making the ground cloddy, and as the rye rots cavities are made at the bottom of the furrow, and a proper amount of moisture cannot be secured and held for a summer crop in a dry season.

SOURING THE LAND.—There is always another danger arising from the plowing down of a heavy growth of rye in hot weather. The mass of green stuff in its fermentation "sours the land" oftentimes, as we farmers express it. There are living organisms in all good soils at work for the farmer, making tough plant-food available. They multiply in a sweet soil, adding available fertility all the time, but cannot thrive in a good soil that has been made acid by the addition of a mass of green material in hot weather. I have seen good fields made unproductive for years by plowing under a heavy coat of rye, clover or weeds in mid-summer. Such a result is not always gotten, of course, but may be expected in warm latitudes, and especially in the case of heavy soils, though very liable to occur with sandy soils also. Much land is slightly too acid for best results in farming.

TURN THE RYE SOD EARLY.—The safe thing to do is to break the rye sod as early in the spring as is necessary for reasonably early planting of a spring crop. The rye will then be several inches high, and the roots will be found to extend deeper into the soil than the plow goes. There will be an increase in the amount of organic material in the land, an increase of fertility and an improvement of the mechanical condition of the soil, without any danger of souring the land or of robbing it of moisture. Rye as a manurial plant has been condemned because it has not been used aright by some experimenters. When crimson clover does not thrive rye is the best winter cover crop we have. It is sure in making a catch, does fairly well on thin land, and works when many other plants would remain dormant.

WHY BUY NITROGEN?—In commercial fertilizers nitrogen is the costliest element, and it is the one that predominates in clover sods and stable manure that has been properly saved. A pound of nitrogen, as found in a commercial fertilizer, costs the farmer from twelve to eighteen cents a pound. The other elements of plant-food cost him from four to six cents a pound. Just as long as the commercial nitrogen is so costly the producer of ordinary farm crops should secure his nitrogen in clover, field-peas and stable manure, and buy only the phosphoric acid and potash. There should be no reason for paying fifteen cents a pound for nitrogen to apply to a soil that produces clover. A fertilizer made by mixing a good grade of superphosphate and muriate or sulphate of potash should be sufficient, and such a fertilizer entails no expense for the costly nitrogen.

REMOVING CLOVER-HAY CROP.—Medium red clover is the most valuable variety, everything considered, because it gives us a crop of choice hay and a good manurial crop the same season. The claim is sometimes made that we cannot expect to improve a soil while removing the first crop of clover for hay, but if this is done as early as it should be, in order to secure the best quality of hay, the weight of the second growth is greatly increased, and the roots and second crop furnish a mass of fertilizing material to the soil. There was formerly a false impression that clover must be plowed under green in order to get the benefit of the fertility. As the plants ripen water is lost, but that is about all. The roots and turf contain a large portion of the fertility. If the first crop is removed for hay, and the manure returned, the hay crop pays the land rental, while the roots and second crop make the soil rich.

MAMMOTH CLOVER.—This variety of clover is especially adapted to seeding with timothy for mixed hay, ripening fairly well with timothy, while the Medium is three weeks earlier. The Mammoth is too rank a grower for hay when seeded alone, but makes a finer stalk in the timothy. It makes its seed in the hay crop, and if the crop is permitted to mature fully the plants die. Where clover is wanted as a fertilizer, with incidental hay crop, the Medium is by far the more satisfactory; but when hay in a permanent meadow is the consideration, Mammoth clover should be seeded with the timothy, giving a good quality of mixed hay the first year a crop is gotten, and adding fertility for the timothy-plants the succeeding years. If the hay is made early a considerable percentage of the clover-plants will live through the second year.

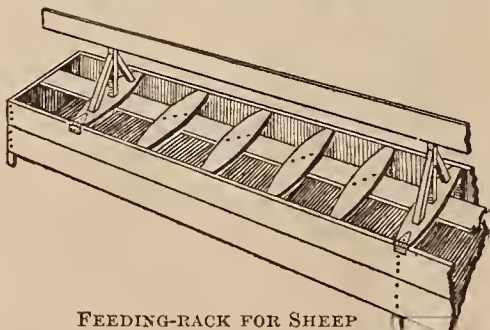
BUY THE BEST SEED.—The farmer should be able to recognize the seeds of our worst weeds, and thus be prepared to detect them in the grass and clover seeds offered upon the market. Plantain has been spread over the country by means of clover-seed. Only clean seed is cheap seed. It pays to insist upon getting clover-seed that is free from weed-seed, no matter if the price is made much higher for the gilt-edged grade than for ordinary seed. I would not accept much seed upon the market as a gift if I were compelled to sow it in my fields. Examine all grass-seeds carefully, and refuse to buy that which contains the seeds of weeds. Carelessness in this matter has cost the farmers of this country losses that can be measured only by millions of dollars.

DAVID.

A CONVENIENT FEEDING-RACK

I recently came across a novel feeding-rack for sheep. I was so favorably impressed with it that I will venture to describe it. The ordinary feeding-rack consisted of four posts about thirty inches long, set up in oblong shape, with another set of posts in the center of the long side. Two narrow fence-boards are nailed to each side and each end, one at the top and one near the bottom, leaving space enough between the two for the sheep to feed through, the whole rack being about two and one half feet wide. Such feeding-racks have been in vogue here and everywhere as long as I can remember.

They have not a few faults. The sheep always run their heads and necks clear into the folder, which causes chaff and the like to lodge in the wool of their heads and necks. Then the feeding sheep are apt to crowd each other, which is a serious objection, particularly with horned sheep, and much harm may result. Sometimes sheep get into the habit of jumping into the racks; lambs nearly always do so—lie on the hay and befoul it. These and other drawbacks brought out the rack here described:



FEEDING-RACK FOR SHEEP

The rack is a box sixteen feet long and fifteen inches high, similar in construction to the old feeding-rack, except that the sides and ends are tight, for the sheep are expected to feed from the top instead of from the sides.

The interesting part of the rack is its cover, which is constructed in the following manner: Lay a six-inch fence-board length-

wise centrally upon the rack, having it rest on the ends of same. Crosswise to this nail on short pieces of board six inches wide and just long enough to rest on the sides without projecting. Space these boards eighteen inches from center to center, which will be about right for average sheep. They should also be tapered down to two and one half inches at each end, and be sure not to have any sharp or ragged edges about them, nor anywhere else about the rack; have everything smooth. It will take eleven cross-pieces for a sixteen-foot rack, and such a one will accommodate twenty-four sheep.

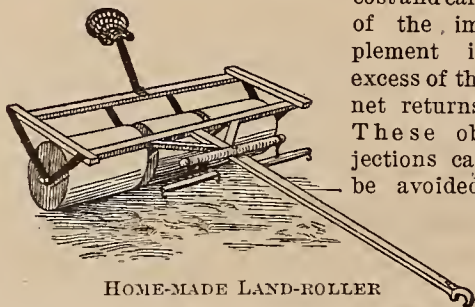
This cover, as so far described, is to be hinged to the rack by means of three T-hinges, so it may be easily raised and lowered when it is desired to fill the rack with hay or fodder. A piece of small rope or clothes-line is to be fastened to the middle crosspiece of the cover just opposite the hinge. This is run over a little pulley fastened to a joist above. A snap or hook should be fastened to the other end of the rope, and a small ring tied into the rope at the proper place, so the cover may be secured in an upright position when filling the rack, by catching the snap into the ring.

This cover is not yet quite completed. Some means must be provided to prevent sheep from jumping onto the rack. This is accomplished by setting up three standards eighteen or twenty inches high, one at each end of the cover and one in the center, and they may be braced as shown in the illustration. To these is nailed another fence-board, and then the feeding-rack is completed.

F. GREINER.

A HOME-MADE LAND-ROLLER

Few things are more essential upon the farm than a good land-roller. Nevertheless, many object to the use of the roller because it frequently tears up the ground for a considerable space when it is turned around, or else the weight of the tongue and frame bear so heavily upon the necks of the horses as to make them sore. Again, some consider



HOME-MADE LAND-ROLLER

Select a good oak or maple log twenty or twenty-five inches through (if more the better), as nearly cylindrical as possible. Having peeled off the bark, sink it under water and leave it there several weeks, at the end of which remove and let it dry under cover. Before it gets too hard saw it up into the required lengths for the rollers; that is, have each of the three sections about two feet in length. Then, having struck a center and worked them to a uniform size, so all will turn alike, bore the holes for the journal. Perhaps the best way to do this is to have a pump-maker (provided there be one in your locality) bore with his auger an inch-and-three-quarters hole through the entire pieces.

When the rollers are thoroughly seasoned, "mount" them, as shown in the accompanying illustration, on a rod of iron or steel an inch and a half in diameter, so it will work as a loose spindle. Above the rollers erect the frame, to which attach the tongue. To make the whole strong and rigid, connect the frame to the iron spindle with brace irons made of old wagon-tire—work which any good blacksmith can do. Use eight braces, two at each end and two between each of the rollers in the center, firmly welded to the spindle in such a manner as to keep the rollers in their respective places and yet allow them to turn readily.

Attach an old mowing-machine seat to the frame, as it helps to counterbalance the weight of the tongue and so make it work easier on the necks of the horses. Having the roller in three sections makes it easier to turn around than if made solid or even in two pieces. This is a cheap, simple, easily made and very practical land-roller. If kept under cover when not in use it will last almost a lifetime.

FRED O. SIBLEY.

WHITE CLOVER FOR LAWNS

It often happens that blue-grass, Rhode Island bent-grass, and other grasses used for lawn work, may fail to grow well upon certain soils—may, in fact, sometimes look worse than no grass at all. In such cases a fairly good and by no means unsightly lawn may be made from white clover alone. It will be found to stand dry weather remark-

ably well, to cover with a close mat of creeping stems the bare spots, and to be easily and readily cut with a lawn-mower. But its greatest merit is that it will in a comparatively short time so improve the soil by the action of its roots in collecting nitrogenous food from the air, that, with the occasional addition of a little potash and phosphoric acid, lawn grasses may be planted with fair, even good results. All that would be necessary in such cases would be to sow the grasses a little at a time among the clover-plants, and to be satisfied with a small catch at first. In time the grasses and the clover would be almost evenly mixed, and with only the usual amount of attention in the way of manuring, would so continue, the grass depending to a large extent upon the clover for its nitrogenous food.

This method has proved very successful upon lawns in New York City, where the surface soil had been buried by earth removed in excavating for house foundations.

M. G. KAINS.

SOIL INOCULATION

The air breathed contains an inexhaustible supply of free or uncombined nitrogen. It is now well known that all classes of legumes—clovers, cow-peas, vetches and beans of various sorts—have the power of absorbing and fixing this nitrogen by means of organisms which live in the root nodules of these plants. From the investigations of scientists it seems that different organisms are especially suited to the different kinds of leguminous plants, and that to insure the greatest growth of the plants the earth must contain a sufficient quantity of the particular bacteria which form the nodules on the kind of legume grown. Various experiments have been made with the soy-bean and other legumes, and it has been found in the case of the former that where grown in soil which had been "inoculated" with bacteria from other soy-bean fields the roots of the plants showed at once a great development of the nitrogen-fixing nodules. It thus appears to be necessary sometimes to artificially inoculate the soil with these organisms. This is done by taking the soil from fields on which a given leguminous plant has flourished and broadcasting it on the field in which the next crop of this plant is to be grown. As the nodules which have contained the nitrogen-fixing bacteria were situated in the soil near the surface, the soil used for inoculation should not go deeper than a few inches.

All leguminous plants take a little nitrogen from the soil, but they do not use soil nitrogen to any great extent. For a brief space of time after the seed has sprouted, when the first roots are being put out, and before



ROOTS OF THE YELLOW SOY-BEAN GROWN AT KANSAS EXPERIMENT STATION ON LAND ARTIFICIALLY INOCULATED

there has been opportunity for the bacteria to work upon them and form nitrogen-fixing nodules, the plant must draw its nitrogen necessary to growth from the soil; but after a short time the plant, no matter how deficient the soil in nitrogen, will take on a rich deep green color, showing that it is getting plenty of this constituent of plant-food irrespective of the supply in the soil. The main object, generally, in planting the various legumes is to make them catch nitrogen from the air, and directly or indirectly renovate the soil, so that the more nitrogen secured the better. It is then important that the plant should make a good growth and store up large amounts of nitrogen, since it is all going back on the farm one way or another. This would indicate, therefore, that it must be well supplied with potash and phosphoric acid. Give cow-peas plenty of these two foods and they will gather plenty of nitrogen. In fact, the amount of nitrogen fixed depends upon the rations given of potash and phosphorus. These two plant-foods are comparatively cheap. It is the nitrogen in complete fertilizers which makes them cost, and this being trapped from the air, liberal applications of the other two constituents can be afforded.

GUY E. MITCHELL.

NOTES FROM GARDEN AND FIELD

EXPERIMENTS IN VEGETABLE-GROWING.—In my last I spoke of the annual meeting of the Western New York Horticultural Society. There the discussions teemed with the practical experience of hundreds of practical growers, while a dozen or more professors from the experiment stations seasoned them with plenty of scientific spice. But everything said was on fruit topics. The subject of vegetable culture was only once touched on in passing, by director Dr. Jordan, of the New York State Experiment Station at Geneva. Why is it that we cannot have such gatherings of vegetable-growers, and as lively discussions on vegetable matters as we have on fruit matters? It is the large nurserymen who form the backbone of fruit-growers' associations, and possibly we may have to call on the seedsmen to form the nucleus of national and local vegetable-growers' associations. We have in the Massachusetts Horticultural Society an example of what can be done in this direction. In a general way I believe that the vegetable-grower is Uncle Sam's neglected child. The interests of the grain-farmer, the stock-raiser, the poultryman, the fruit-grower, all are abundantly taken care of by the stations and the department. The vegetable-grower only is left in the cold, and little assistance is extended to him. No wonder that his progress is slow compared with that of his brethren in other branches of agriculture. Yet there is an important and wide field, and when properly worked, would give great results, as is shown by the example of Professors W. J. Green, of the Ohio station, and E. S. Goff, of the Wisconsin station, who at times have given us startling innovations in vegetable culture. Won't you station people—and department officers, too—pay a little more attention to the important branch of vegetable-growing? It is an interesting and thankful field. The present rate of progress seems awfully slow.

A CONFERENCE ACROSS THE GARDEN FENCE.—In the absence of regular gardeners' meetings we can at least have a conference at the garden fence, as I used to have them with my neighbor almost every day while I lived in New Jersey. He was a market-gardener of much experience, and lived just across the way. As we were both deeply and equally interested in garden problems, he would come over when he saw me at work in the garden in the evening. Then, again, I would hunt him up in his gardens. I now look back with a great deal of pleasure to these tet-a-tetes, as often, with the fence between us, we exchanged experiences and observations relating to garden-work. These conferences were of much benefit to us. At least, I believe that I learned more about the business in one season during that time than I have learned in any two or three seasons since. My neighbor will probably make the same statement. Now, you neighbors get together. If there are three or four of you, all the better. The more the merrier, and the better, perhaps, your chances of learning. The conferences are all the more fruitful while the garden soil is still sticking on your boots and your hand has still hold of the hoe.

COAL-ASHES.—I have before noted in FARM AND FIRESIDE that coal-ashes are much more valuable than generally estimated. A friend of mine reports that he is able to create almost an ideal melon soil by a profuse use of the ash of anthracite coal. Another tells me that he finds there is nothing better for his grapes. I can assure you that there is no better mulch for berry-gardens than coal-ashes. When pear-blight was peculiarly troublesome I found the use of coal-ashes heavily spread about pear-trees almost a specific. The ashes work admirably as a mulch, retaining moisture, equalizing the temperature about the roots, and remaining sufficiently porous.

MORE CATALOGUE REMINDERS.—From the Joseph Harris & Co. comes a modest but neat catalogue, and it reminds me first of all of my old lamented friend, Joseph Harris, the author of some good books on gardening and agricultural topics. It was he who first recommended with a good deal of persistency the use of nitrate of soda, and who more than anybody else has helped to make that form of plant-food popular among market-gardeners. For some years I have been drifting away from nitrate of soda; but the advent of this catalogue reminds me that I must get a new supply and begin its more

regular use again, for it is true that in many cases, especially for such crops as spinach, beets, cabbage, etc., I have had really wonderful results from the use of nitrate of soda.

DANISH BALL HEAD CABBAGE.—The Harris catalogue gives a photo-engraving of the Danish cabbage Solid Empire, a strain of the Danish Ball Head. The Ball Head is almost the only variety now largely grown for some of our markets. It is extremely solid, although possibly not as fine in quality as some other sorts. Last fall one of my neighbors asked me if I could furnish him some Winningstadt cabbage, that old reliable and popular sort, for kraut. I told him that I had something better, and sold him a lot of Danish Ball Head. Afterward he told me that he had never cut a more solid lot of cabbages than those he had of me. The Hollander is offered as virtually the same as the Danish Ball Head. The seed of the true variety is all grown in Denmark, so far as I know. There has, however, been much complaint of spurious seeds in some seasons. I see that almost every seedsman now calls attention to this fact, and claims to offer none but the genuine goods. They can just as well have the true seed if they take proper precautions in procuring it, and I hope gardeners will have no reason for complaining any more.

SOME LETTUCES.—Harris & Co. were the original introducers of The Deacon lettuce, which proved an excellent heading sort for summer, being very slow to go to seed. Now they also offer the Wonderful lettuce as "certainly a wonderful variety," with heads nearly as large and solid as Jersey Wakefield cabbage, and of excellent quality. Mr. Burpee, however, who sends this same Wonderful out in trial packages, says it is only one of the older popular standard sorts. We shall see. Grand Rapids, with its upright, curly and crisp leaves, is a favorite sort for forcing. I do not grow it any more, as my people prefer a close-heading lettuce, such as Buist's or Landreth's Hot-house or Forcing. Boston Market, Big Boston, etc., are not good enough for me. Many of our leading seedsmen do not catalogue the best close-heading forcing varieties. Don't they know a good lettuce when they see it?

GROUND-CHERRY, OR HUSK TOMATO.—The ground-cherry, also known as husk tomato, winter-cherry, strawberry tomato and alkekengi, is catalogued by almost every seedsman in the land. I have grown it for many years. In fact, if you grow it once, plants are likely to come up year after year in the same patch. Most people like the flavor of the preserves made from this fruit, but I have never thought much of it as a vegetable for market purposes. A western market-gardener, however, tells in one of our gardening papers that he has worked up quite a demand for this vegetable, and he finds it very profitable. I saw the yellow "cherries" in the Buffalo market last year, but did not inquire how they were selling. Possibly we might add them with profit to our general list of market vegetables. I might add a word about the Chinese lantern plant, or Giant winter-cherry, as offered by Mr. Maule and a few other seedsmen. This is an interesting plant, but not productive enough for market. The root seems to be perfectly hardy. At least, sprouts have come up from the root year after year where it had once been planted. The red husk and red fruit is decidedly ornamental.

HONOR BRIGHT TOMATO ILLUSTRATION.—In this department in the issue of February 15, 1899, is a description and illustration of the Honor Bright tomato. The cut was prepared by our wood-engravers from a clipping sent in with the copy. At the time the clipping was supposed to be from the catalogue named in the article.

Accompanying a recent letter from D. M. Ferry & Co., the noted seedsmen of Detroit, Mich., is a clipping from their seed annual of 1898, showing a similar illustration of the Honor Bright tomato. "This cut," they write, "was drawn by an artist in our employ, from life, in the autumn of 1897, and we took the pains, as you will see, to have it copyrighted."

We take this opportunity to advise our readers that the illustration is the property, by copyright, of D. M. Ferry & Co. We now know that the clipping came from their catalogue, and not, as presumed, from the one mentioned in the article.

We make this public statement in justice to D. M. Ferry & Co., and ourselves, as we never knowingly transgress any copyrights.

EDITOR.

ORCHARD AND SMALL FRUITS

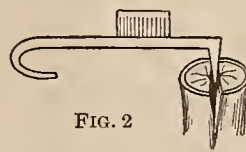
CONDUCTED BY SAMUEL B. GREEN

GRAFTING THE GRAPE

Cleft-grafting is a very common form of grafting, and is more universally known and used than any other. It is commonly performed to change the bearing of apple, plum and various other trees and plants. It is generally the most practical method to use on branches two or three inches in diameter, but it also works well on quite small stocks.

The tools used are a sharp, fine saw and a grafting-chisel, a good pattern for which is shown in Fig. 1, where A represents blade for splitting the stick, B the wedge-shaped end for holding the cleft open, and C a hook by which the tool may be hung on some convenient branch.

Cleft-grafting is performed as follows: The place selected for the insertion of the scion should be where the grain of wood is straight. The stock is then cut "square" off with a sharp saw, and is split through its center, with the grafting-chisel, to a depth sufficient to allow



the scion to be put in place. The cleft is held open by the chisel (Fig. 2) until the scion (Fig. 3) is cut and inserted, when the wedge is withdrawn, allowing the stock to close on the scion and so hold it in place. If the stock does not spring back so as to hold the scion firmly it should be tightly drawn together with a string. The number of scions inserted will depend on the size of the stock. If the stock is not over three fourths of an inch in diameter one scion is enough to insert, but on larger stocks two may be put in. All the cut surfaces, including the ends of the scions, should now be covered with grafting-wax.

The scion to be inserted in cleft-grafting should be cut wedge-shaped lengthwise, as shown in Fig. 3, and its cross-section should resemble Fig. 4, showing the outer bark and the inner. It is necessary for the inner barks of both scion and stock to come together for success. See Fig. 4, showing cross-section of graft.

Grafting the grape is done most safely very early in the spring, even before a sign of growth appears, but it may also be grafted about the time the first leaves are nicely expanded, if the scions are kept dormant until that time. The work should always be done below the surface of the ground. Any form of graft may be used, but that most commonly used is cleft-grafting, shown in Fig. 5. In making a cleft-graft upon a grape-root it is often necessary to saw the cleft in the stock with a fine saw on account of the crooked, twisted grain of the wood, which does not allow it to split straight. Some growers do not use any wax around the graft, but simply cover it with a mound of well-packed earth up to the upper bud of the scion. In grafting after the leaves are expanded some propagators prefer to use side-grafting, and do not cut the vine severely



FIG. 4

until it is believed the scion has grown fast to the stock, when the vine is cut entirely away. Whip-grafting is also used for this purpose. The scions should be about six or eight inches long.

To change the varieties in a vineyard it is sometimes practised to graft on a cane from the old vine. In this case a cane from the old vine long enough to reach nearly midway between the vine is grafted with a scion which should be at least two feet long.

When grafted, the graft, including the cane and scion, should be buried six inches deep, the end bud of the scion being brought aboveground where the new vine is desired. The following year the old vine may be largely cut away and the growth from the scion will take its place. This method is not so neat as when the vine is cut off and grafted below at the surface of the ground, but it has the merit of being very much more certain of not necessitating the destruction of the old vine until a new one is established.

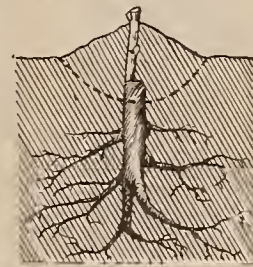


FIG. 5

INQUIRIES ANSWERED

Grafting-wax.—A. L. I., Kingsville, Ohio. A very excellent grafting-wax for general purposes is made as follows: Melt together four parts, by weight, of resin, two parts beeswax, one part tallow; pour into a pail of water, then grease the hands, and pull it until it is nearly white. If it is found to be too soft add a little resin; if too hard add more tallow.

Books on Fruit.—J. J. S., Drakeman, Mo. You can probably get the information which you want on budding and grafting from "Amateur Fruit Growing," published by Farm, Stock and Home Publishing Company, Minneapolis, Minn., at fifty cents. A much more complete treatise is "The Nursery Book," L. H. Bailey, published by Orange Judd Company at about \$1.25.

Slaughter-house Offal as Fertilizer.—S. W., White Oaks, N. M. The offal from slaughter-houses, except fat, is a very good fertilizer when it has thoroughly decayed. The fat, however, is of no value as plant-food. On account of the long time required to thoroughly rot such stuff it does not act quickly, and in general it contains rather too much nitrogen, which is liable, on rich soils, to encourage too rank a growth of wood and leaves at the expense of fruitfulness, but on poor land it would be valuable. In most sections it should be accompanied with applications of potash. Only a small amount should be used near each tree, and it should be buried just beyond the roots, so they can enter it as it decays.

Bismarck Apple—Elm Seedlings.—Mrs. V. H., Running Water. The Bismarck apple has scarcely been fruited in this country, and I have only one report, and in that the fruit is described as very inferior. I have a few trees of it, but they are tender here. This variety is said to come from New Zealand. It was sent out by a German nursery. The interesting thing about it is that it fruits very young. I do not anticipate any extended planting of it, and do not think it will attract much attention after its newness wears off.—Elm-seed should be planted in moist soil as soon as gathered, covering not over half an inch. For best results the land should be somewhat sandy, so the seedlings can easily push through it. The white-elm and rock-elm seed grow readily, coming up shortly after being sown and making a growth of from six to eighteen inches the first season, while red-elm seed, though ripening in June, the same as the others, will not start until the following spring.

Transplanting Trees—Planting Strawberries.—D. A. L., Clarksburg, Mo., writes: "Do you think I could move six-year-old apple-trees with any success? How long would it stop them from growing fruit? I would have to move them a quarter of a mile. Do you think it would pay as well or better than putting out young trees?—Could I put out strawberry-plants this spring, and get any berries from them this year?"

REPLY:—Six-year-old apple-trees could be successfully moved if much care was taken to get a good share of the roots, but as ordinarily done they would not give as good results as thirty young trees. The best way of moving such trees is in the winter, when, if a trench has been dug around them in the fall and filled with mulch, they can be moved to previously prepared holes after the ball of earth has frozen solid. But the expense and risk of moving such large trees is so much that ordinarily I should much prefer to set young trees.—Strawberry-plants set in the spring will not give a crop of berries the same season.

Ashes Around Trees—Injured Trees—Woolly-aphis—Borers.—S. S., Meadville, writes: "Please tell me how much ashes to put around peach-trees as a fertilizer, and how often to use them in a year.—Some of my peach, plum, apple and cherry trees have various sized spots of dead bark on the bodies and some on the limbs, but mostly on the bodies near the surface of the ground. Gum runs out in some places, and the dead bark dries tight to the tree. I have examined, but found no worms.—Please give a description of the woolly-aphis and the round-headed apple-tree borer."

REPLY:—Three quarts of good unleached hardwood ashes is sufficient for a peach-tree of good size, and one such application in the spring should be enough for a year.—I am inclined to think the injury to your peach and cherry trees is due to borers working in the trees near the surface of the ground, and that if you examine them carefully in summer you will find them there. The dead spots on the bark may be caused by some disease, but you must send specimens of the injured parts for examination if you wish to know about it.—The woolly-aphis is a whitish lice-like insect found on the roots of trees, and roots so infested generally have swellings on them. It is one of the most injurious insects we have, and often trees get sickly and die from no other cause. Where suspected, a little examination of the smaller roots near the trunk will soon tell if they are there. There is no satisfactory remedy for them, and infested trees, if young, had better be destroyed, and great care should be taken in buying trees to avoid those that are infested with it. Applications of hot water to the roots near the surface of the ground after drawing back the earth is perhaps as good as any remedy, but not satisfactory.

—In its mature form the round-headed apple-tree borer is a brown and white striped beetle about three fourths of an inch long, which flies at night. It lays its eggs in spring and summer, in the bark near the ground. The worms hatching from the eggs eat into the wood, feeding upon the soft outer layers and excavating a shallow round cavity the size of a half-dollar. Where there are several worms in a tree they may completely girdle it. It remains in its burrows the first winter, and the second season bores into the heart-wood of the tree; here it remains until the next summer, when it comes out a mature beetle. The presence of this borer may be told by the circular patches of dead bark and the worm-dust crowded out through a crack in the bark or a hole made by the worm. The remedy is to cut out or to kill it by running a wire into its burrows. The injection of bisulphide of carbon into the holes with an oil-dropper, and then plugging them with putty or wax, is a good remedy.

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DEVICES FOR SELF-SUCKING COWS

ABOUT thirty years ago, when I first began to keep cows of my own, it was very seldom that we heard of cows sucking themselves. Now such cases are quite frequent; within the last three or four years several cases of that kind have come under my own observation.

Some cows may possibly get into this habit from natural inclination, but more are led into it by some little mismanagement or lack of foresight on the part of the cow-owner or the one who takes care of them. For instance, one of my cows, now seven years old, was at the time of giving birth to her first calf somewhat troubled with garget, and to reduce the inflammation the customary home remedy of a strong brine wash was applied for several days. Whether this was the proper treatment or not I do not say, but it has caused me ever since a great deal of trouble and annoyance. The cow became, through the application of brine to her udder, the most persistent self-milker imaginable.

To free herself from the smart, itching sensation caused by the wash she began to lick herself, and that, of course, gave her a taste of the salt. In applying the wash to the udder it would naturally run down to the teats, inducing the animal to give them a thorough going over also. From licking her teats to getting a taste of her own milk is only a short step, and if she is not averse to the taste of her own milk, or still worse, if she has any liking for it, as in my case, the self-milker is made.

In combating this habit I find that different dispositions require different devices, to be successful. One animal may be easily broken, any little hindrance may stop her, while another is so persistent that it takes the most severe rig to control her.

Fig. 1 shows the first device used. It is cut out of one-half-inch pine board, and slipped into the nose. It is the same device that is commonly used on calves to prevent them from sucking one another. It worked all right for a little while, but soon the cow found out the knack of throwing it up on top of her nose, and she proceeded as before.

I then tried Fig. 2, a halter with a double nose-piece, with spikes driven through the upper part. Although the spikes were all filed almost to needle-points, it did no good after a short time; she would push these points against her flank, and catch with her tongue one teat after another, until all were milked out. Then I added the little strip a, running from the nose-piece nearly to the end of the nose. This had sharpened spikes driven through the end both ways, and was fastened to the halter in such a way that its own spring or stiffness would keep the lower spikes from piercing into her nose. When she tried to reach her teats the upper spikes would not only prick her udder, but the strip would spring down and the lower ones would prick her nose also. This device had the desired effect; when in order it would stop her completely. Now and then the lower spikes would slip back or come out entirely, and when she found it out she would again do her own milking.

Last spring, when I began to turn out to grass, the old spike halter was worn out, and not having proper material to make a new one I made the poke, Fig. 3. It is a double-stanchion poke, made of two-inch-square sticks of soft wood for the horizontals, and one-inch sticks, hard wood, for the posts. The distance between the two pokes is about six inches in the clear. The upper part is adjustable, different holes in the posts admit of raising or lowering the top to fit different-sized animals, and a couple of wire keys hold it in place. Since I have used this poke I have had a full milking from that cow every time she has been milked. About two months ago this cow lost her poke in the pasture, and strange as

it may seem, has so far not shown the least sign of the old habit. The poke was afterward found, and has been hanging up in the barn ever since.

A neighbor used the rig, Fig. 4, made of two straps buckled around the neck, with sharpened slats about ten inches long fastened at short distances, as shown in the illustration.

G. C. GREINER.

RURAL NOTES

Attention to prevent soil-washings is positively the most important matter on our hillside farms. By careful measurement I find that in very exposed places the soil is annually washed off the slopes from four to five inches in depth. The average damage over our cultivated fields is from one to two inches. All this is carried away to fatten the fields of our neighbors below us or largely carried by the streams into the creeks and rivers. A few shallow but clean-cut surface-ditches will catch and carry safely all this washing, if they are provided in autumn. In the spring most of these can be closed up again, although at all times a few are important to carry off the dashing showers of summer. I should hardly consider it possible to make gardening profitable on my southeast slopes without the provisions against storms and waste of soil. One could not otherwise keep up by manures and heavy feeding with the natural wastage.

Timothy hay is the highest in market, but as a rule it is the least valuable for any of our animals. Ripening late, it is liable to be left standing until it is almost worthless for hay. I will tell what I prefer to all other grasses, if I were sure of having it cut exactly at the right season. I would select the common orchard-grass, and would prefer to have in it five or ten per cent of white daisies. The daisy, instead of being objectionable, furnishes an oil which adds very materially to the value of the hay. If in too large a proportion the daisy will fatten our animals and dry up their milk. In all cases orchard-grass should be cut by the last of June or when in full bloom. Fortunately, the daisy is in its prime for feed at exactly the same time.

E. P. POWELL.

NOTES FROM CORRESPONDENCE

FROM GEORGIA.—Hart county is about 125 miles northeast of Atlanta. It is one of the best counties in this portion of the state. We raise good crops of corn, cotton, peas and potatoes. More small grain is being sown this year than usual. Good farm lands sell at from \$5 to \$10 an acre. Hartwell, the county-seat, has about 2,500 population. It can boast of the best school in northeastern Georgia. It has three churches, two canning-factories, one cotton-factory, thirty-five stores, one bank, and our market cannot be excelled.

Hartwell, Ga.

B. B. W.

FROM VIRGINIA.—I live in Albemarle county, where the University of Virginia is situated. This is a great fruit country, especially adapted to the Albemarle Pippins, which have been sold as high as \$8 a barrel. We have plenty of land for sale at from \$5 to \$20 an acre. A man who lives about five miles from here raised last year 163½ bushels of corn on one acre of ground. This shows what our land can be made to produce; but this man is a lawyer and a scientific farmer. It takes brains to farm as well as to practise law.

Charlottesville, Va.

J. D. V.

FROM ARKANSAS.—We are located on the Ozark mountains, in the northwestern part of the state. Benton county is called the "Orchard of America," and, indeed, you would think it was if you should see the fruit shipped out—hundreds of car-loads from many stations. We are on the Port Arthur route, running from Des Moines, Iowa, to Port Arthur, on the gulf. Our land is especially adapted to fruit-growing. It is healthful here—never very cold in winter or very hot in summer. Springs of cold water abound everywhere. Farmers here raise grain and stock, but fruit is the main crop. A six-thousand-acre orchard is being set out near Decatur. We have good schools, plenty of churches and as good society as one could wish for. Land is very cheap, ranging from \$5 to \$20 an acre.

Decatur, Ark.

J. B. P.

FROM WISCONSIN.—The farming-land here in Iowa county consists mostly of what has been cleared of timber, and is quite undulating. The soil is good, and where properly tilled produces fine crops of small grains, corn and hay. The greatest merit of this country is its bountiful blue-grass pasture. When we have plenty of rain it is wonderful how much stock our pastures will carry. There are numerous springs of the purest water, and they make streams and rivers, so most farmers have access to open water. Dairying is the principal occupation. Milk usually brings about seventy-five cents a hundredweight, and is made into cheese of fancy brands, such as Swiss, Limburger and Brick. The cheese-making period extends from the first of May to the first of November. During the remainder of the year the milk is made into butter at home or at a creamery. Representatives of all the northern nations of Europe and of nearly all religious denominations live here, but we all live in harmony. The standard of morality in this community is high.

Blanchardville, Wis.

J. G. J.

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ARRANGEMENT OF PERCHES

FOWLS will jump from the lowest perch to the next, and so on to the highest, and then quarrel. All they want is the highest place. It is preferable to have the perches placed on a level, also the platform to catch the droppings. It may be just high enough to be handy in cleaning, and the perches about one foot above it. All perches should be movable, so as to facilitate the application of kerosene, when necessary, to every part. The reason why fowls all strive for the highest place in the roost is because they possess an instinct which teaches them that the higher they get the safer they are; hence, when perches are of unequal height the strongest fowls occupy the highest place. Probably the air is as pure three feet from the floor as higher. Fowls, when crowded into a small and close apartment, by their respective respirations give off considerable carbonic-acid gas. This, being heavier than common atmosphere, sinks to the floor when cold, and may have a deleterious effect on fowls roosting very low, and odors are also evolved from decaying animal and vegetable matter. The perches should be at least two inches wide and rest firmly in a slot or mortise. Fowls will cling to one edge of a wide perch, and the width will give opportunity to rest the weight on the shanks. A very narrow perch makes it necessary to bear the weight on the breast-bone, mainly in one spot, and thus it becomes bent to one side. This deformity is caused in many instances by roosting on the chine of a barrel or on the small limbs of trees. Old fowls have their bones hardened, so that they will stand the pressure without bending, but all should have wide perches.

FROSTED COMBS

For years breeders have bred both rose and single comb fowls, and have most always found, when the thermometer was near the zero-point, that the single-comb fowls had their combs frozen, while the rose-comb birds were not seriously injured. One breeder of Leghorns claims that his stock of single-combed hens (though housed) ceased laying on account of frosted combs, while the rose-combed hens continued laying, unhurt by the frost. They were all fed and housed alike, yet such was his experience. Rose-comb birds have roosted out of doors on a zero night, and although the wattles were frozen badly their combs were unhurt, whereas a single-comb bird under the same conditions lost both comb and wattles. It is reasonable to suppose that a rose comb will endure more cold than a single comb; but a large comb, either rose or single, is liable to be attacked in very cold weather. A rose comb is compact and full of blood, while the single comb is thin, with little blood in it, and whether large or small, cannot stand severe freezing. The ears, toes and fingers of a person freeze first because they are the extremities of the body, and have not sufficient bulk and blood to withstand the cold that the body has; and so with combs. The rose-comb and pea-comb fowls will endure much more cold than single-comb birds.

THE EARLY DUCKLINGS

Now is the time to hatch ducklings, and as they grow much faster than chicks, and are subject to fewer diseases, they not only reach the market in a short time after being hatched, but the percentage of loss is very small. They also come to market after the weight of from eight to ten pounds a pair at the age of eight weeks, being ready for market in three months from the time the eggs are put in the incubator, four weeks being allowed for incubation. This extraordinary weight shows an increase of half a pound for each week from the date of hatching for each duck, but as they increase faster as they become older, until maturity, those over six weeks of age increase at the rate of nearly one pound a week. The cost of raising each duckling to the age of eight weeks is about five cents a pound of duckling, the price a pound received for each duckling being from eighteen to twenty-two

cents. Young ducks need no pond or water except for drinking purposes, and are fed in the same manner as chicks, except that they require more animal and bulky food, and must be fed often, owing to their rapid growth.

BREAKING A SITTER

When a hen wishes to sit she is usually fat. If you break her she will lay five or six eggs and become broody again. Let her get rid of her fat. Give her one egg, let her stay on the nest two weeks, give her plenty of water, feed only once in two days, and then break her up. She will then have lost flesh, and when she begins to lay she will keep it up. If you must break her, however, get a coop with a slat floor, slat sides and open everywhere. Let it be raised a foot from the ground. Place the coop in an exposed location, where she can see everything around her. Being disturbed, and not being able to warm her airy nest, she gives up in disgust.

PEKIN DUCKS

Rouen ducks are equal to the Pekins in size, lay as many eggs, are more beautiful and grow rapidly, but no duckling will grow as fast as a Pekin duckling up to the age of twelve weeks, nor will any breed thrive as well without a pond as the Pekins. All breeds have some disadvantages as well as advantages. Pekins are white and clean, but a dirty plumage on a duckling that weighs five pounds when it is ten weeks old is better than an apparently cleaner plumage on a smaller one. Never mind the dirt, but try to get the most weight in the shortest space of time and at the lowest cost.

CORRESPONDENCE

EGG-EATING REMEDY.—I have discovered a method of stopping hens from eating eggs, and it is a sure cure. Last summer my hens got to eating eggs, and after studying the subject I bought an extra half-dozen porcelain nest-eggs, scattered them in the hen-yard, and the whole flock rushed for the feast. I kept them moving until the hens got tired trying to pick a hole in them, and gave up the job in disgust, and so far as I know I have never lost an egg since. One of my neighbors across the way had a large yard and large flock, and his hens were eating up the profits. In fact, they could be seen at most any time of the day chasing each other, and the foremost hen had an egg in her bill. I told the owner how to do it, and he tried it. In two days they were cured, and he has never lost an egg since. D. W. K. Boulder, Col.

INQUIRIES ANSWERED

Leg Weakness.—W. W., Edwina, Ohio, writes: "My fowls are fat and look healthy, but lose the use of their legs for awhile, then recover, becoming occasionally lame again." **REPLY:**—Being fat and heavy, they are injured by jumping from the roost. Reduce the food largely, have the roosts low, and separate the males from the hens.

Cross-breeds.—J. W. L., Clarington, Ohio, writes: "I have a rooster—cross-bred Indian Game and rose-comb Brown Leghorn. If I use rose-comb White Leghorn hens will the pullets therefrom be good layers?"

REPLY:—They will no doubt be excellent layers, but will lack uniformity of color, size and shape. It is better to use a pure-bred male that is not cross-bred.

Partridge Cochins.—U. H. J., Quincy, Ill., writes: "How do Partridge Cochins compare with other breeds as layers? What is the time between the formation of an egg and laying? Can it be shortened, etc.?"

REPLY:—Partridge Cochins will compare with any breed, but fatten quickly, hence, must be fed with judgment. There is no special time from the formation of the egg to the laying period, as individuality, the temperature of the atmosphere, excitement, change of location, etc., seem to affect laying.

Indigestion.—C. E. C. writes: "My chickens do not eat, appear sleepy, bowels loose, and some die. They are fat and heavy, are well fed and are given a poultry-food." **REPLY:**—They are probably overfed on grain mostly. Cease the poultry-food, change the food to cut turnips or cooked potatoes, feeding only once a day for awhile, avoiding grain. Anoint heads with melted lard as a precaution against large lice. Give a teaspoonful of tincture of nuxvomica in a quart of drinking-water every day for a week.

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won't "sweep an avenue," but its screech will call attention. These little ads. may remind you we have larger ammunition for the asking. Write us. **PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.**

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In all points relating to Poultry and Poultry Management, care in health and disease with many valuable tested recipes is our annual **POULTRY GUIDE FOR '99.** Tells all about the 40 varieties of thoroughbred poultry grown on Millbrook Farm. The kind to select for best results, how to mate, breed, feed and market them. Worth its weight in gold to the beginner. Sent for 10c. In stamps—merely to pay postage and mailing. Fowls and Eggs for Sale at Lowest Prices. **THE J. W. MILLER CO., Box 162, Freeport, Ills.**

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were awarded my fowls at 12 State Shows in 1898. **FOWLS AND EGGS FOR SALE** price to the first in any locality. Agents wanted. Catalogue free. **CHAS. GAMMERDINGER, Box 68, Columbus, O.**

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QUERIES

READ THIS NOTICE

Questions from regular subscribers of FARM AND FIRESIDE relating to matters of general interest will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should inclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Ashes as Fertilizer.—S. R. G., Osage Mills, Ark., writes: "Are peach and apple wood-ashes spread over wheat-fields beneficial or injurious?"

REPLY:—If unleached they are rich in potash and valuable as a fertilizer for wheat.

Saving Manure.—J. N. B., Woodbury, Md., writes: "What is your opinion about putting manure in a covered pit—the pit to be two or three feet deep, with sides and bottom cemented to hold the liquid?"

REPLY:—All the fertilizing elements of the manure would be saved. Fresh stable manure packed in such a pit would undergo little change, and there would be no loss from leaching and very little by evaporation of the ammonia. A pit in heavy clay soil need not be cemented.

Sheep Manure for the Garden.—T. F., Minneapolis, Minn., writes: "Is sheep manure valuable for market-garden crops, and if so, how valuable compared with other manures and fertilizers?"

REPLY BY T. GREINER:—Sheep manure is one of the very best manures for all sorts of garden and farm crops. Of course, much depends on the way it is made and kept, which is true of all other manures, too. I can state that sheep manure has more nitrogen than horse or cattle manure, and probably just as much potash and phosphoric acid if the liquid portion is all saved, as is usually the case in sheep stables.

Renewing Old Pastures.—A. S., Beauford, Mo., writes: "Can you give me any information in regard to renewing an old pasture where the grass is killed by drought? What kind of grass or clover can I sow to have a good pasture again this summer?"

REPLY:—To renew your pasture without plowing, harrow and cross-harrow it early in the spring, using a barrow with fine, sharp teeth. Sow a mixture of the grasses that do best in your locality, and common red clover. Follow with a roller. Apply a top-dressing of stable manure or superphosphate. This will renew the pasture, but not this summer. To get one that quick is expecting too much.

VETERINARY

CONDUCTED BY DR. H. J. DETMERS

To regular subscribers of the FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Veterinary queries should be sent directly to DR. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered.

Induration of a Part of the Udder.—E. M., Silver Lake, Minn. You can do nothing with the indurated part of your cow's udder but to leave it severely alone if you do not wish to make it worse.

Sore Eyes.—S. A. J., Yelk, W. Va. Horses are subject to various eye diseases, therefore your simple statement that "for two months the eyes (of your mare) have been very weak and running a great deal of water" does not enable me to make any diagnosis, because what you state is the case, more or less, in nearly every eye disease.

Stiffness.—C. B., Tatamagouche, N. S. What you write about seems to be a general stiffness in certain muscles, due to a partial degeneration of their fibers and primarily caused by too much hard work or by overexertion. There is no remedy, although a long-continued exemption from work and voluntary exercise combined with good food may possibly effect some improvement.

Sore at the End of the Tail.—H. J. C., Creston, Iowa. If the end of the tail of your horse has been sore for six months, if at times blood and pus are discharged, and if the hair is constantly falling out, it is highly probable that one or more of the caudal vertebrae at the end of the tail are carious. Get a veterinarian, and let him amputate all that is diseased, and then a healing will soon be effected.

Possibly Spavin.—G. O. O., Lone Elm, Kan. What you describe is possibly a case of spavin. Still, it is also possible a careful examination will bring something else to light. The peculiarity of the lameness of being most severe immediately after a short rest and gradually decreasing during continued exercise speaks for spavin. For particulars concerning spavin consult FARM AND FIRESIDE of November 15th.

An Enlarged Knee.—O. O. W., Oak Cliff, Texas. Your description leaves me very much in doubt as to the nature of the swelling situated just below the knee on the anterior part of the external surface of the metacarpus, or shank-bone. You do not even say whether it is hard and attached to the bone, soft and outside of the bone, or soft

and fluctuating, so it is very difficult to advise you what to do. If no veterinarian is available please write again and give a good description.

Sheep Losing the Wool.—C. C. P., Scandinavia, Wis. A losing of the wool may be due to various causes, but in most cases it is a consequence of some existing skin disease, particularly of that known as mange. As you give no other symptoms I have no means of knowing what may be the cause in your case. Have your sheep examined by somebody familiar with the symptoms of mange, for instance, by a veterinarian or by an experienced flock-master.

A Hard Milker.—H. M., Haneysburg, Ohio. The only rational remedy, as far as a remedy is possible, consists in vigorous milking. An application of milking-tubes, unless made with the most scrupulously aseptic precautions, is, to say the least, a very precarious thing, and in ninety-nine cases out of a hundred not only makes the case worse by causing the production of knots and strictures, but may also cause garget and thus lead to a destruction of the mammary glands.

Lame.—A. S., Thornville, Mich. Since you give no description of the lameness of your horse it is impossible to make a reliable diagnosis. Your statement concerning the origin of the lameness, however, makes it probable that the horse, while stuck in the snow-bank and struggling to get free, either strained some muscles or one or more important nerves on the left side. If this is correct, time will effect improvement, and probably a cure, but I would not advise to put the horse to work, but rather to allow him voluntary exercise.

Sick Lambs.—H. O. M., Axline, Ohio. Your lambs almost beyond a doubt suffer from some worm disease, but the nature of the same or the species of worms that causes the same cannot be ascertained from your statements. Make a post-mortem examination of the first one that dies, or kill the sickest and then make a careful examination of the lungs by cutting open the bronchial tubes clear to their terminations with a pointed pair of scissors, of the liver, of the stomach and of the intestines, and I have no doubt you will find the cause. Your other question I cannot answer.

Sore Shoulder and Withers.—O. M. L., Arvada, Colo. Groom well, keep your mares' "skin clean," at any rate where the collar and other parts of the harness come in contact with the skin, and last, but not least, keep particularly all those parts of the collar and of the harness scrupulously clean and smooth that come in contact with the body of the mares, and you will have no further cause for complaint. To sores and pimples yet existing you may apply twice a day a mixture composed of equal parts of lime-water and olive-oil, and they will soon disappear. The hair of the mane is best cut away where it cannot be disentangled and be cleaned.

Bitter Milk.—J. C., Clintonville, N. Y. Bitter milk, as has been repeatedly stated in these columns, may be produced by various causes. Your cow you say will come in on the sixth of March. If such is the case she ought to have been allowed to go dry as early as the fore part of January, and therefore it is not at all improbable that the bad quality of the milk is simply due to the fact that you kept on milking long after the organism of the cow had to prepare for the coming event. The physiological processes going on in the mammary glands cannot possibly produce two different secretions simultaneously in one and the same organ and keep them distinct and apart.

Tooth-fistula.—S. R. G., Osage Mills, Ark. A tooth-fistula is a pus-discharging opening in either the lower or the upper jaw leading into carious socket of a tooth, or to the carious root of a tooth. If the tooth or its root is carious the tooth must be extracted, but if the caries is limited to the part of the bone forming the socket, especially if there is also an opening at the side of the tooth, the latter itself may be saved. In either case, however, the fistulous canal must be thoroughly cleaned and the carious part of the bone must be removed or be destroyed. The operation necessary here to be performed by a veterinarian, therefore any more instruction will be superfluous.

A "Lump" on the Jaw—Creolin.—J. D., Kernville, Cal. If your sow, otherwise well, has a pus-discharging swelling, or "lump," as you call it, three inches below the eye, she probably has been injured, and if you make a close examination you will probably find that a fistula perforating the bone covering the maxillary sinus leads into the latter. Whether or not it leads still further, perhaps to the root of a diseased tooth, and constitutes a tooth-fistula, cannot be learned from your communication. There is no other name for creolin, a coal-tar derivative, which possesses similar antiseptic properties as carbolic acid, but has the advantages of not being poisonous. If your druggist does not know it he is behind the times. Let him write to his wholesale druggist for Pearson's creolin and he will get it.

Injured Fetlock.—G. W. H., Enid, Okla. If the sore on the fetlock and pastern of your horse, caused eighteen months ago by an entanglement in a rope, has not yet been brought to a healing, a restoration to a normal condition is out of the question. Still, it may not be so very difficult to bring it to healing, but more or less swelling and a horny sear will remain. Keep the horse on a dry and clean floor, and either make twice a day a liberal application of a mixture of liquid subacetate of lead, one part, and of olive-oil, three parts, to all the sores, or else dress them twice a day with a mixture of equal parts, by weight, of iodoform and tannic acid. If you use the last-named mixture, put the powder on a tuft of absorbent cotton large enough to cover all

sores, then put it onto them and keep it in place by a bandage.

Inflammation of the Brain.—J. McC., Cheam, B. C. Your horse died of inflammation of the brain or its membrane (encephalo-meningitis), a disease which in a majority of cases either terminates in death or in more or less imperfect recovery, in which latter case so-called blind-staggers, more or less severe, remains behind. As your horse lingered two weeks and remained a long time in a state of depression before furibund symptoms set in, it is possible that his life might have been saved if the treatment had been a rational one. I do not know anything about your XXX and HHH liniments, and will only say that any one who doses his animals or permits them to be dosed with medicines, the component parts of which are kept a secret, and the effect of which, therefore, is unknown, must take the consequences and has no right to complain.

Lame.—M. M., Burlington, N. C. The only facts that can be elicited from your statements in your inquiry are: First, your horse has off and on (periodically) been lame for fifteen months, and secondly, your horse, when in the stable, does not show any lameness, but stands square on his feet. Although this latter is usually the case where the seat of the lameness is somewhere in the shoulder-joint, it also occurs in other cases in which the seat is somewhere else, and as all your other statements are without any diagnostic value I must decline to make a diagnosis. Besides this, it is a comparatively rare occurrence that lameness has its seat in the shoulder, notwithstanding that on superficial examination it is often located there. Back your horse on level ground and observe how he acts with the lame leg. This done, take hold of the foot of the lame leg and pull forward and observe how the horse will act while you are pulling. Also observe how the horse moves the lame leg when walking, whether the latter is advanced straight forward or not, and how, and report again.

A Collar-sore.—H. R. K., Corson, S. D. What you call a "fungous growth or thickening of the skin on the joint of the shoulder" is undoubtedly nothing but a chronic sore with luxuriant granulation, caused by too much pressure and friction produced by an ill-fitting collar. It may be necessary to destroy the luxuriant granulation (so-called proud-flesh) by an application of finely powdered sulphate of copper, and then to keep the horse idle until a perfect healing has been effected; but it will do no good unless the cause ceases to act, or in other words, unless you have prepared for your horse a well-fitting collar with a concavity on the inside just over the tender place, so that there will be no pressure whatever upon the latter. The best way to reproduce the sore in the shortest possible time after it has been brought to healing is to put a pad between it and the collar, and thus concentrate as much pressure as possible upon the tender spot. The effect of the pad will be still more vigorous if it is not only soaked with sweat and exudates, but also kept coated with exudates, filth and dried blood and pus.

Blind-staggers (?) in Sheep.—J. R. P., Bear Creek, Ala. Unless you mean the disease usually called "sturdy," or turnsick, a disease caused by the presence of one or more cystworms, known as coenurus cerebralis, in the brain of sheep, I do not know of any disease in sheep analogous to blind-staggers in horses. If you mean this coenurus disease, there is no remedy, except in those rare cases in which but one cyst-worm is present, which has its seat on the surface of the brain immediately beneath the teguments of the latter, and in which the seat of the worm can be located from the outside and is accessible, for only in such a case the worm can be removed by means of a surgical operation with any prospects of success. Far more important than a cure is the prevention. The cystworm, coenurus cerebralis, contains the larvae of a tapeworm inhabiting the intestines of dogs. The dogs become infested with the tapeworms if they (the dogs) eat the beads of the sheep that have died of the coenurus disease, and with the beads, of course, also the cystworms. The scolices (larvae) contained in the latter soon develop in the intestines of a dog to tapeworms, the latter produce proglottides (joints) full of eggs, the proglottides, as soon as matured, pass off with the excrements of their host, the eggs become free, and some of them (the majority, of course, will never find a suitable host, and will perish) will in some way be picked up by sheep with either food or drink, the egg-shell will be dissolved by the gastric juice, an embryo will soon develop, and the latter, already provided with books, will work its way through the tissues to its destination, the brain and spinal cord of its host. If the immigration takes place in an older sheep hut few, if any, of the embryos will reach their destination, and but comparatively few of the many thousands of eggs produced by the proglottides of one tapeworm will ever be picked up by sheep; but as the eggs produced are so exceedingly numerous, a very small fraction of a per cent will be more than sufficient to preserve the species. This brief synopsis of the natural history of the worm will suffice to suggest the means of prevention, consisting in giving no dog, fox or wolf a chance to consume the cystworm by at once cremating the bead of every sheep affected with the coenurus disease as soon as it dies or is butchered, and to give no sheep an opportunity to pick up the eggs by permitting no dog on the sheep-range, that is, to resort to the shot-gun policy if the dogs cannot be kept off in any other way. If these precautions are rigidly applied, the disease will soon die out, but if not, the losses will from year to year increase and soon be so great as to make sheep-raising an impossibility.

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OUR SUNDAY AFTERNOON

GOOD CHEER

Have you had a kindness shown?
Pass it on.
'Twas not given for you alone—
Pass it on.
Let it travel down the years,
Let it wipe another's tears,
Till in heaven the deed appears—
Pass it on.

THOU KNOWEST

Lord, all the dreams that I have dreamed,
The hopes I builded fair,
And lifted eager heart to thee
In voiceless prayer—
Thou knowest!
Thou knowest how widely differed far
From mine thy way for me,
How eyes with blinding tears have turned
Too oft to thee—
Thou knowest!

Father, teach me and yet again
The task that thou hast set,
For naught is left but thee, and I
Would self forget—
Thou knowest!

And, Lord, where I have failed, let me
Help some one else to win,
That one whose happy lot I hoped—
I once thought mine had been.
To help—let this my portion be—
Grant but this only boon—
For what I would that I had been,
That I had done—
Thou knowest.
—Florence L. Tucker, in Atlanta Constitution.

IGNORANCE IN BIBLE HISTORY

DR. GEORGE A. COE, professor of philosophy in the Northwestern University, tells of a recent effort on his part to test the Scriptural knowledge of college students. He gathered a company of a hundred students, explained to them his purpose, and promised that no eyes but his own should see the papers. The questions were as follows:

1. What is the Pentateuch?
2. What is the higher criticism of the Scriptures?
3. Does the book of Jude belong to the New Testament or to the Old?
4. Name one of the patriarchs of the Old Testament.
5. Name one of the judges of the Old Testament.
6. Name three of the kings of Israel.
7. Name three prophets.
8. Give one of the Beatitudes.
9. Quote a verse from the Letter to the Romans.

The answers received were all signed by the writers, and Professor Coe expresses his belief that they were, "without exception, sincere." In marking the answers as correct or incorrect Professor Coe put in the former class all that showed even a distant approach to definite knowledge, whether technical or only popular. He says, in an article in the "Christian Advocate," that ninety-six papers were returned, of which eight answered all nine questions correctly, thirteen papers answered eight questions correctly, eleven answered seven, five answered six, nine answered five, twelve answered four, eleven answered three, thirteen answered two, eleven answered one, and three answered none. The number giving a correct answer to the first question was sixty, to the second sixteen, to the third fifty-six, to the fourth sixty-one, to the fifth forty-five, to the sixth forty-seven, to the seventh fifty-two, to the eighth seventy-six, to the ninth thirty-one.

Ninety-six papers, with nine answers on each, give us a total of 864 answers. The total number of correct answers was 444—a little over one half.

Nearly two thirds of them knew what the Pentateuch is, but only one sixth of them knew what the "higher criticism" is, and only one third could quote a single verse from the Epistle to the Romans.

An editorial comment on this says: "The character of the mistakes was largely simple ignorance, indicated by the words, 'I don't know,' and largely an inability to locate persons or texts. Among the 'judges' were named Solomon, Jeremiah, Daniel and Leviticus; among the prophets Matthew, Luke and John. Herod and Ananias were put down as kings of Israel, and Nebuchadnezzar also. One person defined the Pentateuch as identical with the Gospels.

"This test will suggest to many a parent and Sabbath-school teacher the inquiry whether all those who are under their care

could answer a set of simple questions like these.

"Then, too, it may lead some teachers to proffer to their classes, from Sabbath to Sabbath, questions for study during the week, such as will develop a systematic knowledge of the Bible. Half a dozen or a dozen copies could be made, and a recitation on them could be heard on the following Sabbath day.

"If the students in Sabbath-school would undertake each to write out a short essay, outlining briefly some part of the Bible history, and follow it up with other outlines on other parts, they would soon gain such a conception of the history as would enable them to locate events and read the Bible with renewed interest."

THE THORNY PATH

Hundreds of German students arrive at our American shores with hearts full of their German sentimentality, nourished by all the beautiful and the romantic of the old "Fatherland." They expect a philosophical Athens, and find a very prosaic, practical New York. For a short time they indulge in tender feelings as they did in Europe, and cover the awful earnestness of the American battle-field of practical work and life with poetic flowers. But as soon as their last cent is gone then the romance ends and the more stern and awful reality begins. German sentimentality gives away, the poetry, the picturesqueness so beautiful in the sunshine, so fair in soft and sunny scenery of the Rhine, will not stand the rough ordeal of this busy new world. Our European philosopher has to tread the thorny path of American activity. I myself and many others trod it willingly; but many, many refuse to walk on flinty roads. They cannot stand the trial and face the thunder and lightning of the divine truth, "In the sweat of thy face shalt thou eat bread!" They return to philosophical Germany or fall in despair, and a grave in the potter's field covers an unhappy and good but misled and impractical heart of a German student far, far away from the dear old "Vaterland!"—Rev. C. A. Koenig.

HOW SHALL WE MAKE THE MOST OF LIFE

What shall one call that quality which leads some on to make the most of life, and the lack of which holds others forever in the barren lands or at most but on the edge of success? Is it a sort of genius or is it rather the expression of a type of character than the mark of a degree of mental or mechanical adaptability?

A great many people know how to do something, but not a great many people, it would seem, know what the world wants to have done and what part of it they ought to be able to do. With ever-increasing insistence the question comes home to us, Is this state of affairs inevitable or remediable? When trained workmen complain of lack of employment, is the social order wrong, are political conditions at fault, is it a matter of supply and demand for the economists to explain toward solution, or is it a moral and mental sifting process which is inseparable from the progress of the race? Must we apply sympathy, and nothing more, to those ineffectual persons who must not only be trained by society to do a certain kind of work, but must be kept, by society, with that specific kind of work to do?—From "The Point of View," in the January Scribner's.

HARDSHIPS

Young man or woman, do not shrink overmuch from hard rubs and heavy burdens. Character comes by these things.

Addressing a wealthy Boston audience lately, the venerable Edward Everett Hale said, "We must not make things too easy for our boys and girls." He related that when he was a young man he attended a university commencement in order to hear the address of one who was about to enter the arena of life. Ralph Waldo Emerson was in the audience. After the oration was delivered Mr. Hale introduced himself to Mr. Emerson, and spoke a few words in commendation of the orator.

"Yes," said Emerson, thoughtfully; "he is a better fellow than I thought he was. Now, if something will only happen to develop character in him. If only his father will fail in business and become unable to help him, or some other calamity come to be to him a blessing, what a man he may make!"

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EASTER CARDS

THERE are scores of friends to whom one would send a greeting on Easter morn. Tasteful cards are pleasing tokens of remembrance, and are appreciated where gifts of intrinsic worth would be contrary to conventionality.

The simplest card is made of half a sheet of heavy letter-paper cut crosswise. On it paint a sprig of flowers and merely the word "Easter" and the year. A pretty conceit is to paint a spray of forget-me-nots on pale blue paper, a bunch of purple corn-flowers or clematis on lavender, a cluster of pink oleander or red clover on rose paper, etc. Each sheet slips into its envelope of corresponding color, and is ready for mailing.

A fragrant Easter thought takes the form of a flat sachet of silk or satin. Interline the bag with a triple layer of scented sheet-wadding. The upper end is deeply fringed, and has narrow ribbons drawn through, making a slight ruffle-like fullness. The illustration pictures a sachet of turquoise-blue silk with a painting of yellow daisies. A blue and yellow ribbon closes the sachet-bag with a full bow at each end. This style may be more simply made with a line-drawing done in India ink instead of the painting.

Appropos to pen-and-ink work, nothing is more welcome and artistic than a blotter. The illustration suggests a blotter seven by nine inches, of filter-paper made in booklet form of five leaves. With a coarse comb saw the paper into requisite size instead of cutting it with a knife or scissors. By using the comb a pretty ragged edge is secured. Any simple Greenaway figure, with a bunch of spring flowers, mere outline-work, is effective. A dainty design is the milkmaid, a bunch of long-stemmed narcissus, and the verse:

"If 'tis not a true philosophy
That the spirit, when set free,
Still lingers about its olden home
In the flower and the tree,
It is very strange that our pulses thrill
At sight of a voiceless thing,
And our hearts yearn so with tenderness
In the beautiful time of spring!"

The sheets are loosely tied together with a knot of ribbon.

In this line is "A Poesy of Violets Sweet." This is a booklet, seven by four inches, made of parchment-paper. Cut the parchment



into this size with a coarse comb, to secure the rough edge. On the cover paint or draw a cluster of violets, and in gilt lettering the words, "A Poesy of Violets Sweet." If either time or ability are lacking the bunch of violets may be dispensed with, and merely the inscription in gilt. Metallic water-color is best, quickest and easiest to use. The verses on the leaflets may be written, or better, have some one print them on the typewriter, in which case rice-paper is better than parchment. The leaflets, tied together with a bunch of purple ribbons, may be many or few, dependent upon the violet poesy at command. The following verses are suggested:

"No flowers grew in the vale,
Kissed by the dew, wooed by the gale—
None by the dew of the twilight wet
So sweet as the deep blue violet."

"I do love violets.
They tell a history of woman's love;
They open with the earliest breath of spring,
Lead a sweet life of perfume, dew and light,
And if they perish, perish with a sigh
Delicious as that life. Aye!
The violet breath of love is purity."

"After the slumber of the year
The woodland violets reappear;
All things revive in field and grove
And sea and sky but two, which move
And form all others—life and love."

Or instead of using several short poems use that immortal gem by Goethe, "The Violet." There are three verses; use a page for each.

A greeting of sacred significance is made of heavy cream cardboard five by nine inches. Its sole embellishment is a blood-stained cross and the words, "He is Risen." The cross is of birch-bark, neatly glued to the card, the blood-stains of crimson ink, and the inscription in old gold. Birch-bark has the richer effect. If that cannot be procured paint the cross in brown or sepia.

The card or Bristol board is best bought by the sheet. The dealer will have it cut for you into cards of any size.

A further purpose for these cards is the following: Bits of pressed grasses, ferns, small flowers—sweet memories of summer rambles—fulfill a pretty mission in their decoration. Arrange an artistic tangle or bunch of grasses and flowers, and carefully glue to the card. Use library paste, not mucilage. Tie with a baby ribbon run through the card, and inscribe the wish, "May Easter Joys Be Thine!"

ANNA HINRICHS.

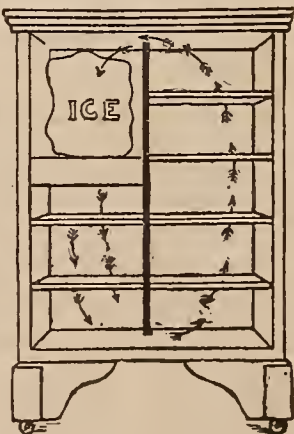
THE REFRIGERATOR

"A carelessly kept refrigerator is the festal hall of the microbe," wrote some one last summer who was evidently the owner of one of the old-fashioned zinc-lined ice-boxes that were once so popular because so little understood in reality. And said Dr. Cyrus Edison, sanitary superintendent of the New York board of health, when at one time speaking of a woman and her housekeeping: "Her ice-box became the most dangerous thing in the house."

Because of many little happenings last season my eyes were opened upon the question of refrigerators, and I began a systematic course of investigation which has resulted in a determination to open the eyes of other housewives if possible. And it shall be the object of this paper to make many explanations, that if heeded will prove to be valuable to every woman who owns or intends to own and operate a refrigerator.

By many who read the FARM AND FIRESIDE it will be remembered that in the June 15th issue of last year I was speaking of "Ice and Refrigerators." A number of letters were received by the writer from those who were especially interested in the subject. After the writing and sending of the article in question, but before it was published, I had invested in a "bargain" (a very doubtful one it proved) in the refrigerator line. It was fully as good as any of the zinc-lined ones, but it was a constant source of annoyance. It kept everything consigned to its care perfectly cold. The water-drain from the ice department

worked to perfection, and there was no part of the ice-box that was not correct according to its style and pattern. But despite all my precaution and care the milk, cream and butter kept therein had always a disagreeable taste. What the trouble could be I at first could not decide. What to do more than I had been doing I could not tell. The refrigerator was almost invariably wet, and there was a musty, peculiar smell from within whenever the doors were opened. The box was almost daily washed out with soda and water, but in a very little time



The trouble was this: When the two currents of air met, the hot and the cold, it caused a condensation, and when the outside air struck the moisture on the zinc it corroded and caused the white substance to form upon the zinc surfaces of the interior

of the box or refrigerator. This same substance is nothing more nor less than oxide of zinc. Should I purchase the article of this name from a drug-store it would be labeled with "the skull and cross-bones," indicating it to be a deadly poison. Is it any wonder, then, that my milk and butter tasted queer and was rendered unfit to eat? Every time I touched of it for food I was taking poison into my system.

It took time to come to an understanding of the situation. But I kept diligently to work, making inquiry, studying refrigerators and experimenting. And as all persistent labor meets its reward, so did this. Thorough investigation as I could possibly make regarding the chemical refrigerators proved conclusively, to myself at least, and seemed to have proven to all whom I questioned, and who were supposed to be pretty good authority upon the subject, that



this manner of refrigerating was not a decided success. The chemicals were said to be so expensive that in continued purchasing of them one soon paid for another refrigerator. They were very expensive to begin with, and the further objection was raised that the odor of ammonia in a room from the chemicals was anything but an agreeable one to come in constant daily contact with.

But my search was continued until I had found a refrigerator that was truly sanitary conditioned. Then was the old-new one that had caused so much dissatisfaction abandoned and the place given to the one that, be assured, was not purchased until thorough investigation had been made. There is not a particle of zinc in all its make-up, and it is always dry and sweet and clean. It is entirely lined with white wood, and the shelves and racks are all made of the same material, coated over with a transparent coating that seals all odors of a wood nature, making it sanitary beyond a possibility of doubt. In the very bottom of the refrigerator there is a galvanized-iron pan. This never corrodes or rusts, as every housekeeper knows. This pan is for the purpose of keeping the bottom of the refrigerator dry in case milk should be spilled. I am not forever (in fact, never) washing out this refrigerator with "strong soda-water to kill the deadly microbes." There are no microbes there. Even the rack that supports the ice is at all times perfectly dry, and the air is cold and pure. Milk and butter can actually be placed on the racks underneath the ice department, and upon the other side of the partition foods bearing odors, such as fruits, cabbage and other cooked or raw vegetables of an odor-giving character, and no taint of them will ever enter the milk-chamber or taint the milk and butter in any degree. Down through the center of my refrigerator runs a partition, dividing the box into two compartments. This partition reaches to within a couple of inches of the top and a couple of inches of the bottom of the machine. This partition forces every particle of the warm air to the very bottom of the refrigerator before it can find an outlet. It is constantly "chased" or forced down by the strong current of freezing air, and by this continual process the warm air passes through the outlet at the bottom of the partition, rises to the top of the refrigerator upon the other side of the partition, where, passing out at the top of the partition, it meets the ice and condenses on the ice, and carries with it all odors from the contents of the box of perishable articles. By tasting the waste water this is proven, for it will give off the taste of articles within the refrigerator.

In my old zinc-lined refrigerator the ice-chamber occupied a good half of the space

of the whole machine. In the one purchased to supersede it the ice occupies but one third of the refrigerator space, and I have found it a great saving in the ice bill, while receiving better cold results from the amount of ice in use. There is no escape of cold air, for the walls of the machine are first paper-lined and then thoroughly packed with sanitary mineral wool. It is thus a non-conductor of hot air. And every housewife who uses a refrigerator knows that in excessively heated days the ice disappears rapidly. I found it so with the old one, and I find the difference very great in the case of the new one.

As I said in my refrigerator talk of last summer, if our farmers only would take it upon themselves to provide for the use of the housewife, home-maker, dairymaid and maid-of-all-work (these usually all combined in one individual) a well-filled ice-house and a first-class refrigerator they would be lightening the labor of their households and adding to the keen pleasure and enjoyment of the lives of their wives as they little realize. The expense is not great, and the comfort of those luxuries is not to be told. Every farmer's wife who has been blessed with this great luxury-help in her housekeeping will attest to the statement, and will help to introduce the ice-house and the refrigerator into farm life and living. I thought of it and talked of it for years before I carried my ideas and plans into effect. And the only wonder of the members of the household to-day is, "Why did I put it off so long?" Summer cooking and cookery have lost many of their terrors and monotony characteristics since the introduction of the commodious refrigerator.

The greater part of the milk goes to the creamery. But tiring of "store butter," and not wishing to be troubled with securing butter from some one who would furnish me with a first-class article if I would drive after it, I concluded to take the milk from one Jersey cow late last summer, keep it in the refrigerator, and make my own butter. This summer I shall follow out the admirable plan the entire summer, and shall save the cost of the refrigerator in actual saving of milk, cream, butter and time. The ice-house so far is a rude affair; but "all in



good time." Slowly all things will be added unto to make everything more and more convenient and pleasant. For I understand too well that with but one life to live below it were worth while entirely to partake of the comforts and luxuries of life as far as possible, regardless of the "big bank account" that too many of our farmers consider of more importance than pretty homes and comforts therein. ELLA HOUGHTON.

THE SECRET OF THE ROSE

Sidney Lanier, whose sufferings only God knew, and one faithful heart as dear to him as life, constantly gathered sweetness out of pain. He wrote:

Would that my songs might be
What roses make by day and night,
Distillments of my cloud of misery
Into delight.

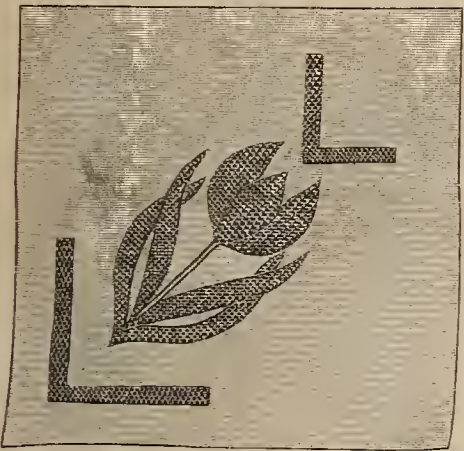
The brave heart that finds constant enrichment in clouds of misery, and distils from pain sunny sweetness and delight, is always in God's hand, a rose.

FRANCES BENNETT CALLAWAY.

PILLOWS AND PILLOW-COVERS

Who is there among housewives who has not at some time gazed ruefully at the soiled spots on the ticking cover of a feather-pillow and declared to herself that it really must be washed despite the unpleasant task of removing and replacing the feathers? It is possible, however, by taking a little extra trouble when making up pillows, to eliminate everything disagreeable from the future care of them.

Having determined on the size of your pillows and your individual preference for hard, loose or medium filling, it is well to ascertain just what weight of feathers for each pillow will answer your purpose. This can be found out by observation and inquiry among friends or in the furnishing-stores. You can then have the feathers for each pillow supplied to you in bags of strong paper, which will enable you without difficulty to make pillows of uniform weight; or if you prefer it, different weights can be ordered for different pairs. Now make bags of cheese-cloth of the same size as the ticking covers, and place the filled paper bags in them. The feathers can be taken out, or if this seems difficult, the paper can be torn and removed in pieces before sewing the small opening left in the cheese-cloth. It is well to have the ticking covers made before handling the feathers, and it is good economy to buy fine ticking. Stitch the seams on the sewing-machine, first on the right and then on the wrong side of the goods, making what is called a sack seam, and leave more than one half of one end open for the insertion of the feathers. Starch the covers with boiled starch, rubbing it well in on the wrong side. Some people prefer soap rubbed in, and either treatment insures a tight cover, through which feathers cannot creep. Push the cheese-cloth bag into the strong cover, fasten the corners of both together, and sew up the opening by tacking the raw edge and then overcasting, to continue the sack seam. Now make slips of thin muslin,



bleached or unbleached, as you prefer, and having put them on the pillows, tack the open end lightly. These can be taken off for washing whenever any stain penetrates the outer case, and by affording a smooth surface next to the case will considerably increase its length of service. Pillows made in this way can be used for years without washing the ticking cover, and should this become necessary through the presence in the house of contagious disease, the feathers can be removed without loss or untidiness, and can be washed, boiled and even dried without taking them from the cheese-cloth slip. At such a time you will be truly thankful that the original trouble was taken which makes possible all these "without's," especially if you live where there is no disinfecting station.

And now a word about pillow-cases. Every one has her own ideas about them, and I suppose each woman's desire is for fine linen. It is a desire beyond the attainment of most of us, however, and good cotton is an excellent substitute. If special pillow cotton, woven on tubular looms, can be procured, it saves a lot of sewing and accommodates itself to the shape of the pillow better than ordinary muslin. Lace and frill trimmed cases are a matter of individual fancy, while many prefer the buttoned cover, which is made as follows: Cut your muslin four inches wider and six inches longer than your pillow, stitch the seams on the wrong side, and make a two-inch hem at the open end; then turn the case, flatten the seams and square the corners, and stitch the three closed sides two inches from their edges. Work six small buttonholes opposite to each other in three places on the inner side of the hem, and when the case is on the pillow fasten with studs which are sold for the purpose. Unlike collar or shirt studs, they are the same size at both ends, and have a very shallow shank. Made of pearl they are rather expensive, but bone ones answer very

well. Pillow-cover, made and adjusted in this way remain uncrushed much longer than the ordinary loose slip, and have a more finished appearance. ROSE CLARKE.

FREEDOM

How much that word means to the children! It means much to us older folks as well, for we pride ourselves on being a freedom-loving nation; and it is an inheritance, this love of freedom, which falls to the American children. Legitimate freedom for the children!

"Johnnie, don't go out of my sight!" I hear my neighbor say, in a sharp, peremptory voice that means business. "Johnnie, you play right round the door, and don't you go out of my sight!"

"Yes'm," says Johnnie; "but—"

"You heard what I said!" is the interrupting answer. "You can do as I tell you or stay in!"

And Johnnie dejectedly trots out with more than half the pleasure spoiled.

The other boys are not restricted to his front fence, and so Johnnie kicks his heels in solitary playfulness and grows irritable, discontented, rebellious and unloving.

Poor Johnnie!

Johnnie is young, but his alert little mind works out and ponders over the fact that he is restricted to the front fence only during play-time. At any other hour it is:

"Johnnie, go to the store!" (The store is half a mile away.)

"Johnnie, take this pattern over to the dressmaker's!" (The dressmaker lives across the railroad track.)

"Johnnie, mind you come right straight home from school!" (The school is a mile away.)

And what is worse than all, and little Johnnie's young mind understands the tone of bribe:

"Johnnie, if you'll be a good boy, and won't make a fuss about taking this big package over to Aunt Allie's, you can play with the boys this afternoon."

(Aunt Allie's is across the river.)

Of course, all these sentences are not hurled at Johnnie at one sitting. They are given piecemeal, to be sure, but Johnnie treasures them up one by one and broods over them individually and collectively, and I do not wonder that his little heart feels the unkindness and injustice of such treatment.

Children have rights!

Do not preach about the duties of children to their parents unless you also discourse upon the duties of the parents to the little helpless children that are given them.

Children have rights, and one of them is a legitimate freedom. Just as grown folks sometimes like to be away from the children, so in turn do the children prefer their own society occasionally. It gives them a chance to think their own thoughts and to act their own little lives; it gives them the pleasure of the feeling of liberty.

Many a mother's heart would not be well nigh broken by a runaway son if she had allowed him some liberty at home.

Children do not crave much, their tastes are naturally small, but they do crave justice and a certain amount of freedom long before one is aware of it; they see and realize the injustice that is being done them by exacting everything and allowing nothing, and if their love and trust be lessened, or if a shyness of character and a sort of deceit be practised, who is to blame—the child who is really too young to fully understand and know, or the mother who curtails all the rightful liberty of her child?

EMMA LOUISE HAUCK ROWE.

FANCY BIBS

Two very lovely bibs are here illustrated, both simple of manufacture and inexpensive.

Fig. 1 shows a dainty bib made from an embroidered pocket-handkerchief. The handkerchief has been folded from corner

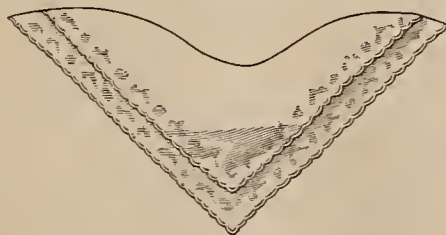


FIG. 1

to corner, one corner being slightly above the other, in order to show both embroidered edges. About one fourth of the distance from either end, where the handkerchief has been folded, a semicircle, or, more correctly, an arc, has been cut out, the two raw

edges thus made being stitched together on the wrong side. This bib, while not as fancy as Fig. 2, is still very pretty, and serves very nicely to prevent the dainty gown or coat from being soiled.

Fig. 2 shows a bib made of fine white China or India silk and white silk lace about an inch wide. Two yards of lace are

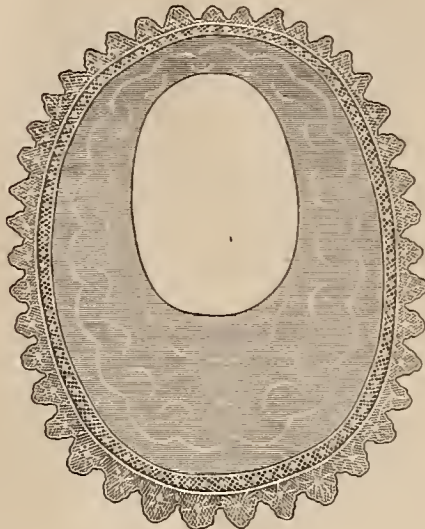


FIG. 2

required for a bib, but one half yard of silk will be sufficient for two bibs. The bib is so simple that a pattern is not needed, only a measurement of the baby's neck being required. The bib is made in two pieces, as here shown (a and b), just gracefully carved and sewed like bib in Fig. 1, on the wrong side. A simple design in cat-stitch completes a very handsome bib.

EMMA LOUISE HAUCK ROWE.

BATTENBERG PHOTO-FRAME

One of the Easter novelties this year is photo-frames of colored satin with Battenberg lace over them. The frame illustrated is for cabinet photos, and requires three yards of narrow linen hemstitched braid and eight rings made over a common lead-pencil.

For the frame, cut a piece of heavy pasteboard the required size, and cover with satin. Cut a thin piece the same size for the back (unless it is to be inclosed in a frame and glass), and cover with satin or cambric. Sew together at the top and sides, leaving the bottom loose, to slip in the picture. Instead of glass use a piece of clear mica to protect the picture. A more expensive frame has the satin mat fitted with a gilt or white enamel frame one inch wide, and glass over the whole. By making the two ends alike, and putting in a linen center, one has a lovely doily.

MRS. H. L. M.

SOFA-PILLOW

The illustration we give of a corner of a sofa-pillow is in the new Calcutta work, which is so simple and yet so effective as to be a prime favorite with every one. The Calcutta pattern only is used upon huckaback toweling for this, and the pattern is outlined and darned in dull greens and blues, making a very attractive pillow. The Calcutta work is a very attractive work, the buttonhole-stitch being the only one employed, making it a delightful work for porch work on summer days. The coloring is oriental in its gorgeousness, and is a relief after the quantities of work done with pale shades.

New kinds of fancy-work are eagerly sought after by those interested in it, and it is only by keeping in touch with embroidery-workers that one is able to find new things.

Another new work entirely is called "fairy lace-work." This can scarcely be described, to do it justice, but is similar to darned network, only the design is in colors and it is worked in colored silks. It can be used for many purposes, and will stand any amount of laundering without loss of color.

LOUISE LONG CHRISTIE.

FASTENING PAPER ON METAL

This is done by brushing the metal with a strong solution of soda, and afterward giving it a coat of onion-juice. Before the latter becomes dry the paper is pressed against it, and held there until thoroughly dry.

J. C. B.

HINTS ON SPRING COOKING

Before the early spring days come we have tired of winter vegetables cooked in common ways, and the appetite often needs a little coaxing to be able to keep up the strength of the body. A new way of preparing a vegetable will often tempt the appetite.

TURNIPS.—Peel the turnips, and cut them into dice. Boil them in water to which you have added one teaspoonful of salt and one quarter teaspoonful of baking-soda. When they are tender drain off the water, and add a generous piece of butter, one teaspoonful of sugar and one half teacupful of vinegar. Season with pepper to taste, let the vinegar boil up once, and serve.

CABBAGE.—Cut a firm white cabbage into quarters, remove the hard core, and boil the cabbage fifteen minutes in water with a pinch of soda. Drain off this water, and add enough more which is boiling to cover the cabbage, add one teaspoonful of salt, and let it boil until the cabbage is tender, then drain it and set aside until it is cold. Chop the cabbage, add one tablespoonful of butter, one teaspoonful of sugar, one half teacupful of cream, and more salt if needed. Mix all well, put it into a buttered pudding-dish, and bake it until a delicate brown. Serve it very hot in the dish in which it is baked. Many who cannot eat cabbage served in any other way find this perfectly digestible.

CARROTS.—Pare the carrots, and cut them into dice. Put them into a saucepan, and cover with boiling water. Add a little salt, and let them boil an hour or until very tender. Drain the water off the carrots, then set the saucepan back on the stove, having added one tablespoonful of butter, one half teacupful of sugar, more salt if needed, one half teacupful of cream, and pepper to taste. Let it just come to a boil, and serve very hot.

CANNED TOMATOES.—Open a can of tomatoes two or three hours before you wish to use them. Drain off nearly all the juice, and put the tomatoes into an open dish. When ready to prepare them for the table put one tablespoonful of butter into a saucepan, and when it is melted add one half teaspoonful of finely minced onion. Let the onion fry in the butter until it is yellow, then add one level tablespoonful of flour, stir it smooth, and pour in the tomatoes; stir all well together, and season to taste with salt and pepper, adding a little sugar if liked. Let it boil ten minutes.

BEETS.—Boil the beets until tender, and



peel and slice them. Put one tablespoonful of butter in a saucepan, and when it is melted put in the beets; turn them and let them fry until hot, but do not let them brown. Now add one half teacupful of vinegar in which you have stirred one teaspoonful of flour and one teaspoonful of sugar, with a pinch of salt. Let the vinegar boil up, and serve the beets very hot.

Beets boiled until tender, and then hashed with an equal quantity of boiled potatoes, seasoned with butter, pepper, salt and vinegar, make a dish my mother used to call "beet chowder," and serve with fresh fish.

As beets will soon begin to sprout it is a good plan to boil some, peel them, and pack into glass jars while they are hot, then fill the jars with hot vinegar, either plain or sweetened and spiced, and seal them. These will keep until summer vegetables come, and may be used as pickles or prepared by either of the above receipts for a hot dish.

DRIED APPLES.—To a kettle of dried apples, after they have been soaked over night, add one sliced lemon or orange or one cupful of raisins when you put them over

[CONCLUDED ON PAGE 12]

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the fire to stew, and you will have quite a different sauce from plain dried-apple sauce. One cupful of this sauce sifted and mixed with one well-beaten egg, and baked either with one crust or two, makes a nice pie. If you bake it with one crust, put the beaten white of an egg over the top when the pie is done, and return it to the oven until it begins to color yellow.

PRUNES.—Wash one pound of good prunes and soak them over night. In the morning set them on the back of the range, and let them simmer two hours at least, adding more water if necessary. When they are done, and before taking from the fire, add one half teacupful of sugar and one teacupful of corn-starch mixed with one tablespoonful of vinegar; move the saucepan to the front of the range, and let the prunes boil for a minute before taking them off the fire.

A friend of mine makes a delicious prune pudding as follows: Stone and chop one pound of stewed prunes, and cut into them the whites of four eggs beaten very stiff. Put the mixture into a buttered pudding-dish, and bake twenty minutes in a moderate oven. Serve cold with cream or a soft custard made from the yolks of the eggs.

MAIDA McL.

THE POULTRY BUSINESS FOR WOMEN

The raising of any kind of young animals seems especially adapted to women, and none more so than fowls, on account of their small size even when grown. A great many women, as well as men, make the mistake of beginning on too large a scale without experience. Many things can be learned in no other way, but it does not always result in dollars and cents, so I have found it advisable to profit by the mistakes of others whenever I can. Perhaps if I tell how one woman raises poultry profitably it will induce some other woman to attempt it.

First, as to the breed of fowls. Each breed has its advocates, but each person must suit her individual taste. I have found that for profit in eggs and poultry a mixture is better than a thoroughbred fowl. One should, however, select wisely in crossing. For my own part I prefer a cross between White Plymouth Rock roosters and Light Brahmas. This gives a good layer, good mother, a low flyer, and an unsurpassed table-fowl. It is well, whatever the breed chosen, occasionally to buy a few choice fowls to introduce new blood into the flock.

Second, as to housing. I do not like too many fowls in one house, so have about fifty together. This method keeps them in better health. The houses are connected with a large shed which faces south, so that in winter the fowls need not wallow in the snow, for a path is made from door to shed, and in sloppy weather planks protect their feet from being chilled. This looks like a good deal of trouble, but I assure you it amply pays. In the house the perches are made so as to be readily taken out, and this is found to be useful, not only in cleaning the floor of droppings, but in putting on disinfectants and vermicides.

Third, as to feed. I insist on wet food at least in the morning, and warm when the weather is at all cool. By this means any tendency to sickness can be corrected by putting a remedy into the food. When fowls run at large, the food after the morning meal is different from that which those in confinement require. Like all animals, the natural food should be considered and as nearly as possible furnished. Fowls, if left to themselves, eat both animal and vegetable food, so if not at large and able to get both kinds it should be supplied. They are very fond of green food both in summer and winter. I prefer mine to run at large.

Fourth, as to marketing. I remember once reading a piece of advice to a raiser of produce, and the idea conveyed was this: Always cater to the trade of the wealthiest people; there are plenty to supply the cheaper trade. In doing this you must always have your goods of the finest quality and delivered in the most attractive manner. I can add nothing to the above advice as applied to the poultry business.

A word more in regard to the care of the flock. Let them follow as far as you can "their own sweet wills." If they prefer the hay-mow in the barn or a shady nook by the side of the wall to your patent wire nests in which to lay their eggs, let them use it. Never be noisy among them, nor allow dogs and children to chase and worry them. I always have them so that I can pick them up anywhere. Recently it was necessary to pick up a brood of little chickens, and the mother-hen allowed herself to be held under the arm of my friend, while she watched me pick up her little ones and place them in a hat with perfect composure.

As to profit I cannot tell what might be done, but I know my flock averages over one half as many eggs as there are head of fowl in the flock. I do more in the egg line than in dressed poultry, but, of course, each year some have to be killed off to make room for the young stock. I am by no means an expert in the business, but I am anxious to see more women making real success out of this delightful occupation. COLUMBA.

SHE THAT HATH EARS TO HEAR, LET HER HEAR

Women who have done their own washing all their lives are apt to think they know everything there is to be known about the subject. "I washed clothes before you were born," they say in response to any suggestion you may make. But with all due respect to their opinion, and with a consciousness that the results of their laborious experience are as near perfection as muscle, time, soap, water and heat can combine to effect, yet why not eliminate the muscle and time from the equation, substitute a washing-fluid, and secure the same results, minus the backache?

Now, you don't believe that such substitution is possible, do you? Nor did scores of others. But try this fluid once, following directions exactly, and you will convince yourself.

Some nervous woman wants to know if it will not eat the clothes. No, it will not, and even if it did it couldn't injure them any more than rubbing could. Besides, if the fluid did injure them, your back would be saved, whereas, if you wear the clothes out rubbing, you throw your back in—and give, besides, as a bonus, many hours of time which you might employ reading, sewing or walking through pleasant fields.

Does it injure your hands? Mercy, no! There is nothing in it to injure muslin, linen, organdy or human tissue. Get a nickel's worth each of soda, salt of tartar and borax, and a dime's worth of potash. Mix these in two gallons of rain-water, and place in self-sealing jars. They require only a short time to dissolve, and the fluid is then ready.

Now follow the directions for its use exactly, and you will be more than gratified. Put the clothes to soak over night in cold water. The next morning fill the boiler half full of water. When the water has come to the boiling-point add half a bar of finely shaven soap and five tablespoonfuls of the fluid. Wring out the clothes, throw into the boiler, cover, and let them boil half an hour. They may then be taken out and examined. Sheets, handkerchiefs, napkins and many other articles will need no rubbing at all, while the very worst soiled articles will have the dirt so softened and boiled out as to leave you practically nothing to do but rinse, starch and hang up.

MARGARET M. MOORE.

"WILL YOU HAVE TIME TO KISS ME ANY MORE NOW, MAMA?"

"Will you have time to kiss me any more now, mama?" So spake little three-year-old Mildred, after sitting quietly for a long time, apparently unnoticed and forgotten, while her mother washed and dressed and kissed the new baby.

The question pierced the mother's heart as though it were a sharpened knife. Had she ever so slightly, though unintentionally, hurt the sensitive feelings of her first-born? Was the little darling who had reigned supreme for the three years to be made disappointed and jealous because of the advent of the tiny brother? She had been so happy that first day when she was told that the Lord had sent her a little baby brother, and had clapped her hands joyously, exclaiming, "Wasn't he a dood Lord? Did you see him," she added, "when he brought the baby down from the Lord's house?" Receiving no reply, she answered her own question in the following manner: "No, I guess you didn't, for I fink he is like the wind and you can't see him;" then started off to bring in her playthings with which to amuse "baby brouzzer."

These memories flashed through the mother's mind at the propounding of Mildred's question, "Will you have time to kiss me any more now, mama?"

"Yes, indeed," said her mother, lovingly, drawing her to her side. "Mama will have time to pet and kiss you as much as she used to do, and both of us will kiss baby and love him dearly, won't we, darling?" Then and there that wise mother destroyed, never to be revived, the seeds of bitterness and jealousy that were beginning to spring up in her little daughter's heart.

ELLA BARTLETT SIMMONS.

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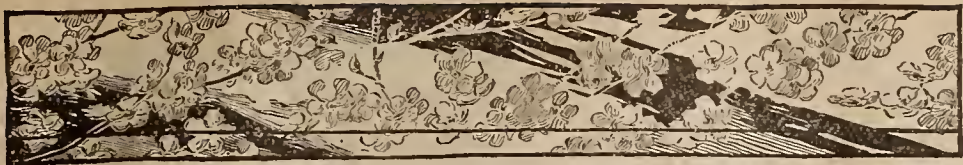
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A DEAD-SEA APPLE

By Virna Woods

Author of "The Amazons," "A Modern Magdalene," "Jason Hildreth's Identity," "An Elusive Lover," etc.

CHAPTER I.

MAN emerged from the doorway of one of the leading hotels of Los Angeles and turned down Spring street. The quickness of his step and the general alertness of his manner might have pointed to some important business; but such a supposition would hardly have accounted for the swift gaze with which he searched the face of every passer-by. It was midsummer, but the afternoon sea-breeze had suddenly changed the almost tropical heat to a sharp, refreshing coolness; and as he walked he turned up the collar of his overcoat and thrust his hands deep in his pockets.

Every now and then, as the crowd jostled by, he nodded familiarly to hurrying men; but he let his eyes rest with careless or amused indifference upon the women, whom the exigencies of climate had forced to throw heavy wraps over their summer garb. He was not a man to pass unnoticed in a crowd. He was tall and well proportioned, and his blonde face was handsome, although grave and marked with premature lines. The eyes were deep set and of a dark, intense blue; the nose had a faint suggestion of the Roman curve, and the somewhat stern compression of the thin lips was not entirely concealed by a drooping mustache and a full light beard. The serenity of the lower part of the face was in sharp contrast with the almost appealing look of the earnest, searching eyes that seemed never to let a face escape them in the throng.

He stopped suddenly and held out his hand as a man accosted him.

"I was just going to see you, Guthrie," he said. "Great minds run in the same channel," was the laughing rejoinder. "I was on my way to find you. There's a tenderfoot at my office who wants to buy some lots of you. I tell you you're in luck, Raymond. You're one of the fellows that always light on their feet."

The man he addressed knitted his brow, and as the two walked down the street together listened to his companion's chatter in silence.

When they reached the door of the office Raymond glanced in. His quick eyes noted the tall, thin figure and the half-averted face of the man who was awaiting their arrival. He stood looking out of a side window and drumming idly on the pane. His skin was dark and his hair plentifully sprinkled with gray. Just above his forehead was a small patch of hair that was almost entirely white. The fingers that tapped the pane were long and bony and reddened at the knuckles. At the sound of steps he turned slowly and peered through his glasses at the door. But Raymond had stepped back on the street, clutching his companion by the arm.

"Good God!" he exclaimed, in smothered tones.

"What the—" Guthrie began, but Raymond cut him short.

"I beg your pardon," he said, hastily; "I had forgotten an important engagement—a matter that means the worth of my fortune to me. You must excuse me this afternoon. I will come down to-night; or if not, you can look me up at my hotel to-morrow." And before the astonished dealer in real estate could recover himself Raymond had disappeared in the crowd.

"I thought there was some one with you," observed the man at the window, in a thin, rasping voice, as Guthrie entered the room. He was peering through his glasses in the manner peculiar to the near-sighted.

"I thought so myself," was the rejoinder. "but I was mistaken. He's off to keep an appointment he had forgotten, but which, nevertheless, was so important that it meant the worth of his fortune to him. I call that eccentric."

"He has a fortune, then?" inquired the other, with languid interest.

"I should say he has," replied Guthrie, seating himself in an arm-chair preparatory to an off-handed business chat. "And he's made it all in the boom. Why, that man came to me not three months ago with two hundred dollars and wanted to invest it. He said it was all he had in the world. I put him on to a little transaction and it turned out well. After that he managed affairs for himself; and now he's in with the best of them. It isn't all in Los Angeles, either. He's had too much sense for that. He's made investments in different parts of the state, and has accounts at several San Francisco banks. The whole of Los Angeles could burst like a bubble and he'd still be rich. And I tell you," continued the loquacious agent, suddenly mindful of his business, "I'll put you up to the same kind of a deal if you wish."

But the man he addressed was not to be diverted from his purpose.

"I want to talk with Mr. Raymond before I make any investments," he said; and inquiring the name of his hotel, he hastily excused himself. Meantime Raymond was hurrying to his hotel.

For once his questioning eyes did not search the faces of the passers-by, but gazed straight before him in a stare of fear and horror. His face was ashen; the lines that suffering had traced

deepened, giving it an expression of agonized terror. His rapid step had quickened almost to a run, and people turned on the street, throwing after him swift glances of surprise.

When he reached the hotel he did not ring for the elevator, but sprang up the stairway and hurried across the hall into his room. He locked the door, and throwing himself into a chair, covered his face with his hands. He was shaking as with an ague.

Half an hour later, when he appeared at the office to settle his bill, his face wore its usual look of grave sadness; and to the surprised inquiry of the clerk he replied carelessly that he had been summoned by business to San Diego.

Less than five minutes after his departure a tall, dark man entered the hotel in nervous haste and inquired for him. Receiving the information that Raymond had gone to San Diego, he hurried out, staring excitedly through his glasses and brush-



SAUNTERED THROUGH THE STREET

ing from his forehead in absent-minded agitation a lock of white hair.

"If I hadn't lost my way in this confounded place," he muttered, "I would have been in time."

Guthrie sat alone in his real-estate office that evening, pondering with some curiosity over a message he had received from his visitor of the afternoon to the effect that he had been called away suddenly on business. Meantime Raymond, whose appearance he momentarily expected, was sitting in a Pullman sleeper of the north-bound train. For hours he had gazed abstractedly out upon a monotonous landscape of cactus and desert. At first he had seemed ill at ease, and at intervals glanced furtively about the car as though he suspected the passengers of watching him; but when he saw that he was unobserved he turned back to the window and resumed his idle gaze at the sand-plains.

"They are like my heart," he muttered to himself; "and my life," with a bitter smile, "is like yonder cactus-tree, gnarled, fantastic and unsightly."

He glanced once more at the passengers in the car; to see if the involuntary movements of his lips had attracted attention; but the faces were impassive, with the weary look of resignation that accompanies travel over the heated plains.

At length, however, a man in the adjoining section turned around with a smile.

"Would you like to look over the paper?" he said, holding out a Los Angeles daily.

"Thank you, no," answered Raymond, with suppressed irritation.

"Do you never read the papers?" queried his neighbor, with an attempt at jocoseness.

"Never," replied Raymond, with a shrug. Noticing the expression of blank amazement on the inquirer's face he hastened to explain. "They are so unsatisfactory," he said; "one never knows if their reports are unprejudiced or their items manufactured."

"They are deuced bad, I know," said the other, laughing, "but I take it they are better than nothing."

As the taciturn traveler did not reply he turned back, and drawing from his satchel a paper-backed novel, was soon absorbed in its contents.

Evening came, and the train stopped at Nojave for dinner. Raymond sat by his window watching the passengers as they hurried from the train to the eating-house. His attitude was that of languid curiosity; but his eyes, half veiled by heavy lashes, had in them a tense, strained look. When the last of the travelers had filed across the depot platform Raymond rose leisurely and followed him to the eating-house. At the doorway he threw a swift glance about the room, then entered, and sat down at one of the tables. He ate little, but drank his wine and coffee eagerly, and was one of the first to return to the train.

Early in the evening he asked the porter to make his bed, and soon after withdrew behind the curtains. But for many hours he did not sleep. The intense heat of the day had been succeeded by comparative coolness, and the bright moonlight lay on the stretch of plains and the weird, fantastic shapes of cactus that rose like monstrous creatures of savage myth, with gnarled and knotted arms and limbs stretched out as in pursuit of

The train thundered on through the darkness. Little by little the tossing and the low moans of the sleeper ceased and he lay wrapped in profound silence. It was past midnight. The train swayed and rocked from side to side as it rushed over the steep and curving track. The dust blew in through the screens of the open windows and lay on Raymond's face. One of the sashes fell with a rattling noise, heard over the roar of the wheels and the hissing of the engine, but he slept on, his face noble and tranquil in the moonlight, with the lines smoothed from the brow and the lids drawn over the intent look of the eyes. But as he slept a shadow crossed his face; he frowned, and his lips curled in angry scorn. Suddenly a mingled expression of loathing, fear and wrath succeeded the serene strength of his look; his hands clinched and struck out wildly in the air. He groaned aloud and sprang up with a cry, striking his head against the upper berth.

"The dream, the dream again," he muttered, his eyes dilating and the cold sweat standing on his brow. He looked at his hands; they were still beating the air. He fell back on his pillow, trembling violently.

A moment more and his nerveless fingers had found the bell in the wall. The porter parted the curtains and looked in.

"A glass of brandy, quick," he gasped, and the porter, terrified by his agonized white face, hastened to do his bidding.

When he returned Raymond had regained his composure, but he swallowed the brandy with eager haste.

He slept no more, and ate but little breakfast in the dining-car. When he reached San Francisco he looked haggard and worn. He went to a small hotel he had once heard recommended in Los Angeles, and in the afternoon he visited a bank and a real-estate office. The evening he spent in his room over his papers.

He remained in the place several days, spending his mornings and afternoons out and his evenings in his room. He made friends with none of the boarders, and the astute landlady discovered that he had two peculiarities: he never read a newspaper, and he kept the light burning all night in his room. The worthy woman's curiosity was further stimulated by a strange occurrence four or five days after his arrival. He went out in the morning and did not return for lunch. In the afternoon she received by mail the money due her, with instructions to forward his effects to Sacramento.

"But there's no Sacramento train until four o'clock," she said to herself, in surprise, "and the morning trains had all gone when he started out."

But she had forgotten the Livermore train, with its circuitous route and additional two hours of travel, and it was on this train that he had taken his departure, crouching back in a corner of his seat as they steamed out of the Oakland mole, lest the thin, dark face he had encountered in the crowd on Market street might have followed him to the boat and peer out at him with its near-sighted eyes from the surging mass of people hurrying to the different trains. But even as the fear whitened his cheeks he glanced over at the Berkeley local and saw the face silhouetted at the window. With a sigh of relief he sank in his seat, and as the train pulled out of the mole at last, drew from his pocket a small map of California and spread it out on his knee. His fingers, following a line of railroad that started from Sacramento and broke off abruptly in the foothills of the Sierras, stopped at the black dot that marked the terminus of the road. Then he turned to the book accompanying the map and passed his eye down the list of towns.

"Population one hundred and fifty," he muttered; "it is as good a place as any."

He folded the map, replaced it in his pocket, and leaned back with a sigh.

CHAPTER II.

"Veva, Veva!"

It was the voice of little Phil calling to her.

She rose from her couch and went to the open window. As she stood there she made a picture that an artist might admire and long in vain to reproduce on canvas. She was a tall, slight girl, with a face the beauty of whose features was accentuated by a skin so transparent that the blue veins showed in the temples and even in the softly curved but colorless cheeks. The eyes were deep and dark, the brown hair fine and luxuriant. The pose of the figure was languid but graceful, the pose of the head suggested a Diana. She wore a loose morning gown of a soft pink fabric that supplied the color her face lacked and gave the touch of perfection to the picture she unconsciously made, framed in by the broad casement of the low window. But there was no one to admire her in Lupine Springs. There was no one in sight but little Phil, who clamored vociferously for her attention.

"See!" he cried, "I've invented a toboggan-slide."

The girl smiled as she saw a ladder resting against the side of the stable, with long boards nailed to the rungs.

"I'm afraid sister will scold you," she said.

"But it works beautifully," the boy insisted. "Just see how I do it."

And before she could protest he swung himself from the roof of the woodshed to the eaves of the stable, and seating himself at the top of the ladder, made the descent to the ground with perilous celerity.

"You'll kill yourself!" cried the girl, growing a shade paler.

"No, I won't," laughed the boy; "not till I've invented a flying apparatus. Will I, Babens?" he added, turning to a midget in white who had suddenly appeared from within the stable and promptly clamored for a ride. He lifted her in his arms and was about to climb with her on the

some hapless creature across the plains. As the fancy crossed Raymond's mind he shuddered and withdrew his gaze.

"Good God!" he muttered, with a groan that was lost in the roar of the train, "if I could only forget for a single moment."

By the light of the moon that shone through his open windows he saw his strong right hand lying on the blanket; with a shudder he drew it out of sight. He turned again to the window, and saw that they were ascending the mountains toward Tehachapi pass. Little by little the noise of talking ceased in the car and only the thunder of the train kept up a roaring accompaniment to his thoughts.

"It is five years," he whispered, "but it is the night. It is the seventh of August. If I could keep awake—"

He heard the sound of laughter from the outside, then a girl's voice.

"We have entered the loop," she said. "Look up and you will see the rails shining above us in the moonlight."

Mechanically he looked through his window and saw the long curve of light against the side of the mountain that marked the line of their ascent. A few moments more and the line of light had disappeared. Again the girl's voice rose above the roar of the slackened train.

"We are on the upper curve now," she said. "Look below on the other side and you will see the track we have just ascended."

"How happy she is," muttered the traveler; "how innocent and happy."

He turned wearily on his pillow and fell into an uneasy slumber.

woodshed roof, when the girl rushed from the house and snatched the child from him.

"Come with Aunt Veva, Babens," she coaxed; "she'll rock you on the front veranda."

"And sing the seepy-song?" asked the child, visibly hesitating between the two attractions.

Upon an affirmative answer, the child went contentedly enough, and the girl, seating herself in a low rocker, took her up in her lap. As she rocked she hummed softly the slumber-song and looked dreamily beyond the crooked, dusty street to a glory of violet and purple hills crowned with snow.

It was a perfect summer day. A golden haze seemed to shimmer in the air and settle softly in luminous mist on the pine-clad hills that surrounded the village. The long hotel veranda was deserted save for the girl and the child; there was no sign of life at the depot across the way, and the only person visible on the street was the postmaster standing in the doorway of his store. But the girl knew that before long the stage would come lumbering out of the stable at the side of the hotel and cross the street to the rear of the station, and that five minutes later the morning train would rush by the corner of the house and pull up at the little depot. Then the hundred and fifty people that formed the population of the place would appear as by magic, lounging on the little platform and crowding in the door of the store, one corner of which was sacred to the United States mail. Then before long the trainmen, summoned by Chock's gong, would come to the hotel to dinner, departing soon after for the return trip to Sacramento. In the evening the freight-train would come, with its mail-car and caboose, and the men would have their late supper and sit in a row on the veranda tilted back in their chairs against the wall and smoking their pipes and cigarettes. The two events were the only incidents of the day worth mentioning, and it was one of the few excitements of the girl's life to sit on the veranda and see the train come in, a messenger from that mysterious outside world of which she was so ignorant, for all of her knowledge of it was but the blurred recollection of her early childhood.

Singing softly the song that Babens loved, she let her thoughts wander back to the time she had first come to the village, eleven years ago. She was but nine years old, and since the death of her father and mother had lived with an aunt in Ohio. Her sister, six years her senior, had gone to California, half as servant, half as companion to an old lady who had visited the Ohio village that was their home. More than a year had passed since the separation, and now and then Veva had shown in the childish prattle of her letters that her aunt was not always kind to her. At last her sister had written to her that she was to be married and Veva was to come to California to live with her.

"For the land sake!" ejaculated the aunt, when she read the precious letter to Veva. "And that child only fifteen years old! And to marry the brother of old Mrs. Johnson! Why, he must be old enough to be her grandfather. I call it flying in the face of Providence to make a match like that."

But the child did not heed her. She thought only that she was to be with her sister again.

She made the overland trip in charge of the conductors, and became the pet of all the passengers. At Sacramento her sister had met her. The child-wife, so young in the eyes of others, looked grown up and womanly to the little one, who noted with wondering awe the long dress and the heavy coil of hair that had superseded the short skirts and the great braid of her recollection. But the face and the voice were the same, and Veva had sprung into the arms held out to receive her, with a sob of joy.

It was dark when they reached Lupine Springs. On the platform at the depot stood an old man with white hair and long white beard.

"This is Veva," said her sister, as she lifted her down from the steps.

The old man bent down and kissed her. Veva wondered who he could be.

They crossed the street to a large white house with a long veranda. Half an hour later they sat down at a long table where there were a number of strange people, and an odd-looking yellow man with a thin black braid waited on the table.

"What is it, sister?" whispered Veva.

Her sister laughed.

"That is only Chock, our Chinaman," she said.

The child noticed that the people called her sister Mrs. Parker, and the old white-bearded man at the other end of the table Mr. Parker, and it began to dawn upon her mind that he was her sister's husband. But she was too tired and sleepy to speculate much about it, and as soon as they had finished dinner her sister put her to bed.

The next day her sister said they would take a walk to see the town. Veva had stood a moment on the veranda and looked about her. It was the same scene that she looked upon to-day, except that the houses were not quite so weather-beaten and the station platform was comparatively new. In the center of the town stood the depot and the freight-sheds; to the left was the railroad track, beyond which stretched an irregular line of cottages; to the right a dusty street on which fronted two stores, two saloons, the shoemaker's shop and several dwelling-houses. All about them were the pine-covered hills, on the slope of one of which was a white marble shaft that Veva afterward learned marked the resting-place of Mr. Parker's three departed wives.

The sisters walked up the foot-path that bordered the dusty street, passing the long freight-sheds and the stores, and coming to the foot of a hill, on the summit of which stood a little red house in a grove of pines.

"That is the school-house," said Mrs. Parker. "You will start to school next week."

On the other side of the railroad track was a

hotel that formed the extreme eastern limit of the village. Beyond, the track and the dust road wound between the hills till they were lost to sight in an abrupt curve.

"Is this all?" said the child, looking up with a sigh of disappointment.

And the words had echoed in her heart ever since.

Was that, indeed, all that she was ever to see of the world? There had been a time when she had thought that she would go away and teach and make a place for herself in some city. But as she grew older the ambition was perforce laid aside. She had been a frail child, and years of sickness had unfitted her for severe work of any kind. So she had been compelled to content herself with her studies, assisted in her higher work by the college girls and normal-school graduates who had occasionally come to teach in the little red school-house. And she had grown away from her environment and lived a dream-life in the world of books. But most of all, she reveled in the beauties of the scenery about her. Very early she showed her precocity by sketching on her slate the hills and canons, and occasionally reproducing the familiar faces of the villagers.

Nevertheless, it had been very monotonous at Lupine Springs. She had often wondered if love would ever come to her. It was not that she had no admirers; for had not Mr. Tompkins, the school-master, who had starved in the practice of law and made an assignment in snags and teas, offered her in succession the patent medicines with which he ruined his system, and finally asked her to share the failure of his life? And had not Will Nelson, a brakeman on the Sacramento train, sworn he would throw himself in front of the engine if she did not marry him? And when the hotel house-maid, with whom he had consoled himself, died, did he not renew his suit? Did not even the passenger conductor, who had been on the road for seventeen years and was considered a confirmed bachelor, venture on sentimentalities on the moon-lit veranda till she had checked him with gentle but efficient firmness? Then there was the drummer on his way to Minerville, who had brought with him a wandering preacher of the foot-hills, and wanted her to marry him on the spot; who was afterward discovered to have a wife in the East. Last of all, there was Bill Selleck, the Minerville stage-driver, a gruff, grizzled old fellow, who had let her climb on the coach and "make believe" she was riding when she was a child. He had never dared to tell her that he loved her; but her woman's instinct had divined it long ago. She smiled when she thought of the motley list and compared them with the lovers in the books she had read. But she sighed when she realized that she had never really seen a gentleman of broad culture and travel and knowledge of the world; and who of that description would ever, in the course of human events, come to Lupine Springs?

Then she thought of her sister's life, and her own seemed enviable. She knew now the tragedy of a loveless marriage, and she knew now it was for her sake the sacrifice had been made. Mr. Parker was not unkind to his wife, but he thought he made her full payment for her youth and beauty in the home he provided for herself and her sister, and he did not dream of the self-contempt and loathing for her bondage that lay under the calm exterior of her life. It was only when Veva thought of Babens and little Phil that she felt the anger against her sister's fate die out of her heart. Babens was her namesake, but it was confusing to have two Vevas in the family, and the full name, Genevieve, was too long for such a tot, so they called her by the pet name Veva had given her.

The child had fallen asleep in the girl's arms, and the lullaby had ceased under the insistence of the singer's thoughts.

A sharp whistle roused her from her reverie. She glanced up and saw the stage standing by the depot, the driver lounging on the platform and cracking his whip. The next moment the train came thundering by, passing close beside her in its oblique line to the station. The engineer nodded as he went by, and the conductor tossed her a magazine that had been discarded by one of the passengers. In the moment that the last of the three coaches flashed by she saw a face at the window. She had never seen it before, but it seemed to greet her like the face of an old friend. She had an odd feeling that she had been waiting for it all her life. The train stopped at the station, and the few passengers that alighted hurried to the stage; all save one, a tall, blonde man, who stopped on the platform and spoke to the baggage-man. The latter pointed over his shoulder with his thumb, and the stranger crossed the dusty street to the hotel. Veva, confused by the recognition of the face at the window, rose and stood before him, holding the child by the hand.

The stranger bowed, and lifted his hat.

"Can I get a room here?" he said.

There was a deference in the musical voice that was new to Veva. Her heart thrilled with a strange delight.

"Yes," she said, flushing. "Come into the parlor and I will speak to my sister."

He followed her into the room, his eyes resting on her dainty figure with a pleased surprise. As she disappeared in the hall, the child clinging to her hand, he glanced about him.

[TO BE CONTINUED]

A PASTE with which wall-paper can be attached to wood or masonry, adhering to it firmly in spite of dampness, is prepared as usual of rye flour, to which, however, are added, after the boiling, eight and one eighth grams of good linseed-oil varnish and eight and one third grams of turpentine to every five hundred grams.—Western Painter.

HOW FATHER GLEASON GAVE IN

BY MARGARET L. KNAPP

HERE, there's been enough said! You've heard my plans for you. I suppose you think you know what you're about, but you'll never marry the girl with my consent."

"But, father—"

"That'll do. I don't want to hear another word about it."

Father Gleason stood up at the supper-table to make this speech, and meant to turn away with dignity, but his chair stuck, and he shoved it aside, and went out of the door with a set jaw and an obstinate swing of his shoulders.

"Your father's made up his mind," said Mrs. Gleason.

It was well known in this little Kenoria household what it meant when Mr. Gleason "made up his mind."

"He wants everything just as he says; but you mustn't go against him, Sam; he's your father."

"I don't want to go against father," answered Sam, his slow, sweet-tempered voice ringing with unusual feeling; "but even my father has no right to tell me I shall or shall not marry any girl. I have some rights myself. Mother, what is it sets him so against Martha Williams?"

"He thinks she isn't strong enough to do the work on a farm."

"I don't know that it's necessary she should work herself to death, like some of the women around here. I'm able to work for us both!" said Sam, with sudden heat.

"He's taken a notion against the things she's been doing at the school—those gymnastics; he thinks it trifling."

"She told me the boys and girls sprawled all over their desks, and were getting short-sighted; the seats were too high, anyway. They sit straighter now. The children think it's fine; they call them the 'jimmnanastics.'"

Sam gave a short laugh, and got up. His mother looked at him apprehensively.

"You goin'?"

He nodded. "Don't worry, mother."

She caught him by the arm. Her nervous, wrinkled countenance was puckered with gathering tears.

"Oh, Sam, you're all the boy I've got, an' I wish it was different for you! He means right; he wants you to do well. He thinks if 'twas only Emmie Beekman, a likely girl an' peart, an' a good farm waitin' for her, it would help you to get ahead."

"Getting ahead' isn't everything in this world," answered Sam. "A man wants something else—something to get ahead for. Don't you know it's so, mother?"

"Maybe I do—maybe so. I haven't a word to say against her, Sam; she's a nice, pretty girl, an' pleasant—"

"Isn't she?" asked Sam, suddenly beaming. "Those little ways of hers; I never did see any one with such pretty ways. And just as good—"

He broke off, kissed his mother, and went out of the house with something in the set of his back that was like his father.

At the corner of the porch he stopped.

"Can I do anything for you, Grace?"

The young woman in black, who occupied the rocking-chair, raised her eyes indifferently from the book she was not reading.

"No, thank you, Sam. You'll have a beautiful evening going over."

"I wish she wouldn't say things like that," thought Sam. "I wish she'd ask me to get something or do something; but she doesn't care."

Grace Caldwell was a widow, who had lost husband and children all at one time in a diphtheria epidemic. Since she had come home to live no one had heard her laugh or seen her shed a tear.

When Martha Williams first came to Kenoria the one thing that she became most homesick for was trees—not these regularly planted, thrifty peach and apple orchards, but a few birches, oaks and hemlocks that had just "grewed," and a ravine in a green, ferny wood, with the clear, brown water trickling down. The sound of that water haunted her dreams. She would stand at the window, looking far and wide, fascinated by what she saw, and yet repelled.

"Shall I ever get away from this hateful country?" she had once asked herself. She did not ask that now.

She found the school in a state of neglect; it had been so long since it had had a progressive teacher. There were only two or three big boys, and yet every one looked at her doubtfully.

"You'll have trouble with Ralph Dishrow," they said.

"Shall I? Why?"

"He makes trouble for everybody who tackles our district. Oh, you'll see!"

"But I am not supposed to know that, and perhaps he will make a fresh start," said Martha.

She noticed Ralph particularly after that—a heavy-browed boy of fifteen, who looked strong, yet stunted in growth. He and Tom Kirk did make trouble; it was an experiment. They had a reputation to sustain.

Martha kept them behind one day to help her, and then turned upon them with some straightforward, business-like talk.

"It would be foolish of me to threaten to whip you," she said. "I don't think it is a woman's place to thrash boys who are almost men. You are stronger than I am; can't you put your strength to some good use? I want to say this: I have had a chance to learn a good many things you have not, and you will be finer men for knowing them. I am not going to coax you to study, but I am ready to do all I can to help you. Do your part, and I will do mine. Is there anything unfair in that?"

"No'm; fair enough."

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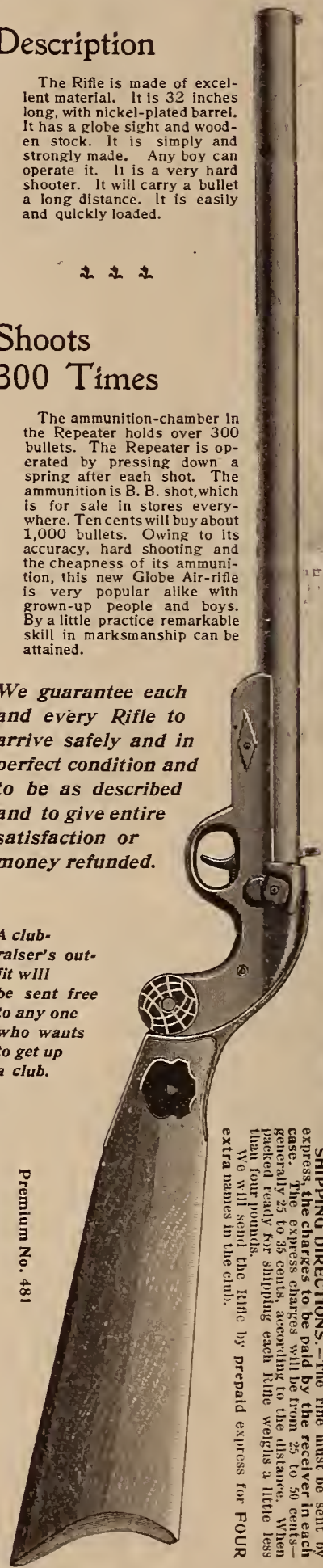
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Then she shook hands with them both, and casually called them Mr. Kirk and Mr. Disbrow as she thanked them for their help.

She was a picture of dainty grace in her summer gown, with frills about the neck, Sam thought. He took the chair beside her, not saying much. This big fellow had an air of reserved, kind strength that was refreshing to her. There had been others to admire the bright young teacher, but they were not like Sam. She had said to herself lately that nobody was like him.

Yet when Sam, encouraged by her preference, asked her for a kiss she gently refused.

"Your father doesn't like me yet," she explained.

"It isn't as if we were regularly engaged."

"I shall never marry any one else!" said Sam.

"I only asked for one; I haven't asked you before."

Martha was always unexpected. Her face was lit up with wistful feeling.

"Save up till I am an old lady. The supply seems to give out before that time with a good many people!"

"It won't with me! It'll hold out for more'n one lifetime!" The words came out with a rush. "Martha—you'll let me call you Martha, anyway, won't you?"

Martha turned toward him sedately, flushing over so little, her chin tenderly raised, without comment. And somehow that meant more to Sam than all the easy courting which was the custom in Kenoria. But that was like Martha, always; she had a finer atmosphere about her.

Winter set in. Cold winds blew from the north. All the land seemed frozen in great waves to Martha's unaccustomed eyes. It was snowing hard one afternoon while she gave a reading-lesson. She was too much absorbed to notice the weather; but presently she saw Ralph looking out of the window, frowning uneasily. Instantly, with senses on the alert, she called him to her desk.

"I don't like the look of it," said he; "we had a blizzard year before last that began this way, and folks couldn't get out for three days. Two men froze to death. I think we ought to go home. I'm not trying to get out of my lessons, Miss Williams, honor bright!"

"I know it, Ralph."
She dismissed the school, and began to help the smaller children put on their things, watching Ralph the while. Ralph went ahead, Martha last, holding little Nelly by the hand; the others huddled in between them.

"Now, keep close together," said Martha, cheerfully; "take hold of hands."

It was not far from a neighbor's. This Eastern girl was ignorant of all but the name of a blizzard, with its furious, freezing wind. The snow was not very deep, but it had blown in heaps across their path. She had to lift Nelly over them.

"Oh, I'm so cold!" they cried, forlornly.

"We'll soon be home. Come, march fast and tramp down the snow. We're soldiers—right! left!"

The soldier fiction buoyed them up for a time. Nothing could be seen around them but that white darkness. They ought to have reached the nearest house by this time. Martha strained her eyes ahead; she could hardly see her own length before her.

"Ralph!"

Ralph turned in his tracks, put his hands up to his head, breathing hard, and answered the unspoken question desperately:

"I'm afraid we're—off the road. I don't—know where."

A child broke into frightened crying. The sound went through Martha like a spasm, and her heart died within her. She was terribly fatigued. Her skirts bung about her, clogged with snow. Oh, if she could sink down and not try to go on, only get away from the wind that was beating out her brain! It was but a flashing thought; the next moment she had rallied her courage, knowing that all depended upon her, and called, resolutely:

"Then we'll go right on the best we can. Mary? Ruth? Jack?" She went over the names of her little flock as they toiled along. They answered, "Present."

"Now, when I call your names you must answer."

She feared some child would be left behind.

How long they were out in the storm they never knew. Not long as time went, probably. Martha was at the end of her strength. Still she cheered the others, and praised, and kept them together. It seemed to her as if she had been going on so all her life. Nothing had ever happened before.

Ah! was that a glimmer over there to the left?

"Ralph!"

Ralph saw it, too, and they cried, "Hallo! Hallo!"

In a moment some one shouted, "Who's there?"

It was Mr. Gleason's voice.

"Teacher!" called Martha.

It was strange, but at that moment she could not remember her own name.

"What you done with the children?"

Had that girl from Massachusetts lost her senses and left them to take care of themselves?

"They're all here. Oh, come!"

Sam's figure dashed out past his father, with a lantern hung around his neck. "I'm coming, Martha!" he shouted, shoveling furiously, for they had approached on the unsheltered side of the house, and the wind had blown a drift between them and the door, which would have to be shoveled aside.

"Keep moving; you must not stand still!" said Martha to the group huddled around her. "Arms up; one, two!"

"I can't!"

"You must!"

Discipline was strong in the school, and they followed her movements. A minute more and Sam was near enough to touch Martha's shoulder.

"Martha!"

"Nelly first."

One by one the girls and boys were passed up to

the door. Last of all Sam gave the lantern into his father's hands and lifted Martha in his arms. "Poor girl!" he said, tenderly.

Then a feeling of great peace came over her. A breath of warmer air, a sudden dazzle of light, and the exhausted girl knew no more.

Sam shut the door with his shoulder, and stood with his back against it, facing his father like a lion at bay, still holding the girl's unconscious figure in his strong arms. His face was glowing red and set in firm lines; there was a look in his shining eyes that silenced them all.

"Father, she's my wife!"

"Well, I sha'n't hinder ye, Sam'l," answered the old man, his weather-beaten features suddenly working; and he turned his back.

"Carry her right in there," said Grace, coming forward; "on the sofa, Sam—that's it. The children mustn't come too near the stove; they're 'most frozen! There, dear, don't cry! Does it ache so bad? Poor little midget! Now you will be better."

She was the mistress of the occasion. It was she who had hastened to place a pan of milk on the stove. It was she who was kneeling by the smaller children, pulling off their shoes, rubbing bare feet and hands, going from one to another with hot drinks, looking after them all, even Ralph, who had frozen his ear, and who now felt her kind hand rubbing it with snow, while her usually impassive face wore a bright color and a look of almost joyous excitement.

The big kitchen was full of cheerful bustle. Brave fires were kept up. The little ones, reviving, began to feel it an adventure, and giggled softly at one another. After all, no one was much the worse. This being together like a party in a kitchen not their own, perhaps sleeping there all night—for there would be no getting home before morning—how odd and exciting it all was!

Martha opened her eyes on the lounge in the sitting-room, to find Sam bending anxiously over her, while his mother hovered in the background with a steaming cup of ginger tea. Her memory returned with a rush, and she started up.

"The children! Oh, are they safe?"

"Every one," said Sam. "Don't worry—there—Martha!" and choked, for with the loving look of a tired child Martha drew his hand to her and held it under her cheek.

By and by she awoke from a drowsy half-consciousness with the feeling of a hand laid gently on her hair, and looked around; but the figure tiptoeing to the door was not Sam, it was his father.

Next day the storm had cleared enough for Sam to break a way to the nearest neighbor's. It was bitter cold, but his heart kept him warm. Good news finds some way to travel by, and the anxious families that had set up all night, saying over and over that there was plenty of wood in the school-house, learned that the little school was safe and sound. Even Ralph's hard-natured father showed some feeling.

"Thought ye wa'n't such a fool as to get lost," he remarked. "Teacher, hey? Know smart folks that wouldn't have made it out as well. You can take her over some of that honey to-morrow if you want to. Get your work done."

Ralph went to work, regardless of his aching ear, glad at heart—because of what? Because his father had told him for once that he was not a fool.

"Dad sent you t'is," he said, going into the room where Martha lay on the sofa. "Oh, say, you're sick!"

"Only a sore throat," returned Martha, smiling welcome, "and getting used up and frightened. I never have been so frightened in my life. What should I have done without you?" and she put her hand on the boy's knee. "Ralph, you're splendid!"

Ralph looked from the friendly hand to the fine face, realizing, with a shade of awe, that it is good for a boy to realize that courage does not depend on physical strength, but on the spirit that can make a frail body do its will. He colored up to the roots of his hair, and blurted out, with awkward enthusiasm:

"You're another!"

When a new school-house was built in the fall, who should offer herself as teacher but Grace Caldwell? That night of the children's invasion had brought something back into her broken life. Her own children had been taken from her, but there were all these other little ones in the world. If she could do anything for them she would not be useless. "I have been a mother," she said, "and I shall know how to be patient." So she borrowed Martha's text-books and sat studying beside her through the summer days, while the others looked at her often and at each other, as if to say, "Our Grace is more like herself."

Did Martha ever say again that she longed to get away from that "hateful country?" No, for she married Sam Gleason that fall, and went to housekeeping in a new house of Sam's own planning. A good deal more than timber and nails went into the building of that broad piazza where Martha will sit, surrounded by vines, on summer afternoons. There will be no careless, unlovely customs in their home. Martha has her blue and white china and her glossy table-linen on the table every day, and Sam likes her dainty ways.

"You'll be a teacher all your life, Martha," Sam told her one day. "You're teaching me something new all the time."

"Not more than I'm learning of you," and Martha's face wore the look that always made him leave whatever he was doing and go over to stand beside her in silence.

Strangers who hear Mr. Gleason mention "my daughter Martha" always think it is his own daughter he speaks of. All his crust of prejudices melted away with the blizzard. For the first time, perhaps, since he was a grown man he has found some one who understands him and likes him without being afraid of him.

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SMILES



THE DOCTOR'S TRIUMPH

They sawed off his arms and his legs,
They took out his jugular vein;
They put fancy frills on his lungs,
And they deftly extracted his brain.
'Twas a triumph of surgical skill
Such as never was heard of till then;
'Twas the subject of lectures before
Conventions of medical men.
The news of this wonderful thing
Was heralded far and wide;
But as for the patient there's nothing to say,
Excepting, of course, that he died.

—Public Health Journal.

WHAT A VISITOR LEARNED

THE visitor was being conducted through the large public-school building by its proud woman principal. His introduction to a class was something like this:

"Oh, see all the little girls! Busy, children? Happy? Now, why do you come to school? Truly, you don't like to?"

A little giggle was the affirmative answer.
"Now, children, I think you said you had a little piece to say. What little girl will say a piece?"
Forty hands were up at once, and ten more a little later.

"That little girl."
A seven-year-old in checked pinafore rose, and making a little bow, which made her two golden pig-tails fly around amazingly, began:

"How doth er 'tittle buthy bee improoth eath thingin hour?"

And the next little girl lisped in the same way about the acorn, and another about the field-daisy and the butterfly.

"My children, you all lisp," suggested the principal.

"Yeth, ma'am," said one; "thath becauth we hathn't all our teeth." And a finger pointed to the place where two front ones ought to be.

"Oh!" said the principal. "How many little girls have lost teeth—baby teeth?"

Forty-two out of fifty children held up their hands. Only eight had all their teeth.

"Now, why do you lose your teeth?" asked the principal.

"So ath to get big onth," was the answer.

"How many kinds of teeth do you have?" asked the principal.

All numbers were given.

"Three?" said the principal. "What is the third kind?"

"The kindth you keep in a glass," was the answer.—New York Advertiser.

TOOK HIS WIFE'S ADVICE

When the man whose hair-cut showed that his wife had peculiar notions as to the way a man should dress his hair quit giving advice one of the listeners said:

"No man has more respect for a woman than I have, but I shall never take the advice of my wife again about money matters. She insisted upon my hiding my salary, so if I should be held up the highwaymen wouldn't get it. I draw my stipend at six P. M., and it is quite dark before I get home. She is a good hider in the house, but her talent in that line stops there. Now, she had the brilliant idea that I should put the envelope containing my money under the sweat-band of my hat. Highwaymen would never look there, and would never rob a man of his hat. After she had made this suggestion about forty times I accepted it. I went home as usual on the elevated. I had a slight attack of vertigo in the car, and the man who always knows what to do said I needed fresh air, and threw up the window. In doing so he knocked off my hat. I went home bareheaded and broke."—New York Sun.

A TRICK HE DIDN'T LEARN

The old master had known all about "cribbing" as a schoolboy, and had never forgotten the little tricks and dodges.

One day during an examination the keen-eyed teacher observed one of his pupils take out his watch every minute or two. The pedagogue grew suspicious. Finally he strode slowly down the aisle, and stopped in front of Willie's desk.

"Let me see your watch," he commenced.


"Yes, sir," was the reply.

The teacher opened the front of the case. He looked somewhat sheepish when he read the single word "Fooled."

But he was a shrewd man. He was not to be thrown off the scent so easily. He opened the back of the case, then he was satisfied.

There he read "Fooled again!"

PRETTY GIRLS, THESE

The Houtzdale (Pa.) "Journal" says:
"The  of the Houtzdale girls are slender and delicately tinted, their hair is like *** , and they are without = in this or any other \$. Their frowns are like † † † , and their 1 2 3 4 5 0 excite ! ! ! of pleasure and a desire to m— them. Read this ¶ closely, and do not ? its veracity."

THE SCHOOL POET

At a school where a Miss Blodgett was teacher a little fellow composed the following, and wrote it on his slate, to the amusement of the other boys:

"A little mouse ran up the stairs
To hear Miss Blodgett say her prayers."

The teacher discovered the rhyme, and called out the culprit, and said she would give him five minutes to make up another rhyme or be caned.

After thinking and blinking and scratching his head for some time, the teacher was just lifting the cane, when he exclaimed:

"Here I stand before Miss Blodgett;
She's going to strike, but I'm going to dodge it."

A SATISFACTORY TEST

"So you want to marry my daughter, eh?" queried the old man. "Do you think you have the patience and forbearance to make her a kind and indulgent husband?"

"I don't know, sir," replied the would-be son-in-law. "I can button a stand-up collar on a shirt that is a half-size larger without getting angry, and I—"

"Say no more," interrupted the old man. "Say no more, but take her, my son, and my blessing goes with her."

APPRECIATING OUR BLESSINGS

Willie, a five-year-old youngster, was in the habit of complaining of his dinner, and one day his father said:

"Willie, you should not find fault with what is set before you. When I was your age I was thankful to get enough dry bread to eat."

Willie finished his dinner in silence, but as he climbed down from his chair he said:

"Pa, ain't you awful glad you come to board with us?"

WHAT SHE THOUGHT

She—"Then I got right mad and told him what I thought of him."

He—"What did you say?"

She—"I don't remember."

He—"That's queer. You ought to know what you think of him."

She—"Oh, I know what I think of him now, but I do not remember what I thought of him just then."—Indianapolis Journal.

QUITE DELICATE

Mrs. Gabb (hostess)—"Your little son does not appear to have much appetite."

Mrs. Gadd—"No; he is quite delicate."

Mrs. Gabb—"Can't you think of anything you would like, my little man?"

Little man—"No'm. You see, mom made me eat a hull lot before we started, so I wouldn't make a pig of myself."—New York Weekly.

A SHARP SERVANT

Debt collector—"Is your master at home?"

Servant (curtly)—"No, he isn't."

Debt collector (suspiciously)—"But I can see his hat hanging up in the hall."

Servant—"Well, what's that got to do with it? One of my dresses is hanging on the line in the back garden, but I'm not there!"

A SUNDAY-SCHOOL YARN

A teacher of a class of boys one Sunday took for his afternoon's lesson the story of David and Goliath. After having thoroughly gone through the subject, he put the following question:

"Now, boys, who was it that killed Goliath?"

Immediately the dull boy of the class answered:

"Jack, the giant-killer, sir."

WOULD DIVE FOR IT

Mrs. Chaffie—"I don't know how I can get Johnnie to take his medicine. If I tell him what it is he won't take it, and if I don't tell him what it is he won't take it."

Mr. Chaffie—"I'll tell you what to do. Just put it on the table and forbid him to touch it, and then he will take it sure."

A TICKLISH THING

No wonder a girl hesitates the first time she goes to kiss a man with a mustache. It's a ticklish piece of business.

LITTLE BITS

Mr. Henpeck's version—"When a woman will, a man must."

Don't quarrel, church folks; don't quarrel. No use setting your dog-ma on your brother's cat-echism.—L. A. W. Bulletin.

A little girl's father had a round bald spot. Kissing him at bedtime not long ago, she said:

"Stoop down, popsy; I want to kiss the place where the lining shows."

FINE SILVERWARE

THIS SILVER-PLATED WARE can be used in cooking, eating and medicines the same as solid silver. The base of this ware is solid nickel-silver metal, and being perfectly white and hard it will never change color, and will wear a lifetime. This ware will not, cannot turn brassy, corrode or rust. We absolutely guarantee that each and every piece of this ware is plated with the full STANDARD amount of pure coin-silver. In beauty and finish it is perfect.

FULL SIZE

All of the ware is full regulation size; the Knives, 9½ in. long; Tablespoons, 7½ in.; Dessert (or Pie) Forks and Dessert (or Soup) Spoons, 7 in.; Teaspoons, 5½ in., etc.

GUARANTEE

We guarantee every piece of this ware to be exactly as it is described and to give entire satisfaction or money refunded.

Will Stand Any Test To test this silverware use acids or a file. If not found to be plated with the full standard amount of pure coin-silver and the base solid white metal, and exactly as described in every other particular, we will refund your money and make you a present of the subscription. If returned to us we will replace free of charge any piece of ware damaged in making the test.



INITIAL LETTER Each piece of this ware (except the knives) engraved free of charge with an initial letter in Old English. Only one letter on a piece. Say what initial you want.

The base of the table-knives is fine steel highly polished. They are first plated with nickel-silver, which is as hard as steel, then plated with 12 pennyweights of coin-silver. The best silver-plated knives on the market. For want of space pictures of the Gravy-ladle, Berry-spoon, Pie-knife and Child's Set are not shown here, but they are all of the same design and full regulation size.

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Is absolutely chemically pure—free from mercury, acid, ammonia, grit, or other injurious substance. It is the only material which cleans and polishes silverware perfectly at the same time. A child can use it. Comes in quart packages—enough to last the average family for several years. Never loses its strength. Try it, and if you don't think it the best and cheapest polish you ever used or can buy anywhere else we will refund your money and let you keep the polish. A quart package of Ariston Silver Polish will be sent to any address for 25 cents, or will be given free to club-raisers for sending TWO extra names in a club.

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We will send the Farm and Fireside one year and the Silverware to any one at the following prices:

Farm and Fireside 1 year and a Set of 6 Teaspoons for	\$.75
Farm and Fireside 1 year and a Set of 6 Forks for	1.25
Farm and Fireside 1 year and a Set of 6 Tablespoons for	1.25
Farm and Fireside 1 year and a Set of 6 Knives for	1.75
Farm and Fireside 1 year and a Set of 6 Coffee-spoons for	.75
Farm and Fireside 1 year and a Set of 6 Dessert-spoons for	1.00
Farm and Fireside 1 year and a Set of 6 Dessert-forks for	1.00
Farm and Fireside 1 year and Berry-spoon for	.60
Farm and Fireside 1 year and Pie-knife for	.60
Farm and Fireside 1 year and Gravy-ladle for	.60
Farm and Fireside 1 year and Butter-knife and Sugar-shell (both) for	.50
Farm and Fireside 1 year and Child's Set (A small Knife, Fork and Spoon) for	.60

(When any of the above offers are accepted the name may be counted in a club)

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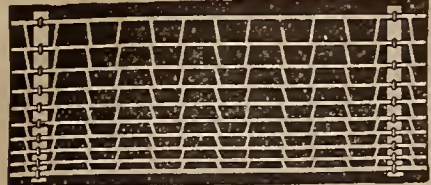
For Clubs of Subscribers to the Farm and Fireside

Set of 6 Teaspoons given free for a club of four subscribers.
Set of 6 Forks given free for a club of seven subscribers.
Set of 6 Tablespoons given free for a club of seven subscribers.
Set of 6 Knives given free for a club of twelve subscribers.
Set of 6 Dessert-spoons given free for a club of five subscribers.
Set of 6 Dessert-forks given free for a club of five subscribers.
Set of 6 After-dinner Coffee-spoons given free for a club of four subscribers.
One Berry-spoon given free for a club of three subscribers.
One Pie-knife given free for a club of three subscribers.
One Gravy-ladle given free for a club of three subscribers.
Sugar-shell and Butter-knife (both) given free for a club of two subscribers.
One Child's Set (A small Knife, Fork and Spoon) given free for a club of three subscribers.

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with a Champion Sickle and Tool Grinder GRINDS A 6-FT. SICKLE to the most perfect bevel and keenest edge; grinds heel and point and opposite sides of a section at once. Is adjustable for all work, stone stationary. Flat stone grinds plow points, cultivator shovels, discs, axes and all kinds of tools, quicker and better than any machine made. Stones made of corundum. Will last 20 years. Try it. If not found the best and handiest made, return it at our expense. Price, 1 stone for sickle, \$4.25 stones for all work, \$5. Also all sizes and kinds of Plows, Cultivators, Hand and Horse Seeders, Drills, Planters, Rollers, Mowers, Hay Rakes, Hay Carriers and outfits, Wind Mills, Pumps, Spray Pumps, Harness, Disc Harrow, cuts 6 1/2 ft. \$15.99; Smoothing Harrow, cuts 7 1/2 ft. \$4.25. We have no agents. We sell direct to you at lowest prices, on trial, without a cent with order. Send for FREE 320-page Agricultural Catalogue.

Marvin Smith Co., 55-57-59 N. Jefferson St. Y 26, Chicago.

THE WONDERFUL "U. S." FENCE
The only wind-proof fence that is visible across a 160-acre farm. Elastic, strong, cheap and CAN'T bag or sag. It must be introduced at your place. To do so quickly, we almost give first shipments away. Freight prepaid. Write at once.

ELLIOTT & REID CO., Box P, Richmond, Ind.

2 CENTS.
We will send for a two-cent Postage Stamp a sample of this Triple Silver-plated Ladies' Stick-Pin, or Gentleman's Scarf-Pin (The Famous Lucky Star Pin). The Star and words are in blue enamel. Sample, by mail, Two Cents. Address

LYNN & CO., 48 BOND ST., NEW YORK.

ONLY 10c. Secures post-free everything below: 1 Nice Rolled Gold Ring; 1 new Kazoo Music Novelty; 1 Screacher, the Mystic Whistle; 1 Game Package, 15 cards; 1 Magic Gold Tube; 1 Gold Plated Clover Leaf Scarf Pin; 1 Punch and Judy Whistle; 6 Colored Crayons in Box; 1 Flag Pin; 1 Colorado Gold Pen; 1 Japanese Handkerchief; 1 Japanese Whistle; 1 Magnet; 1 Stone Set Ring. THESE 19 GRAND ARTICLES neatly packed and mailed to any address for one dime. Address L. B. GOGGINS, P. O. Box 31, ROSELLE, N. J.

SOME BARGAINS Cheapest place on earth to buy goods.
Knee pants 14c; men's jeans pants 49c; flannel overalls 15c; smoking tobacco per package 35c; boys' suits 89c; 10 heavy envelopes 1c; 10-quart tin pail 3c; pins per paper 1c; sardines per box 35c; men's \$2.50 congress shoes 98c; men's solid working shoes 69c; women's \$1.75 button shoes 79c; linen thread 2c; a good dipper 2c; gold plate ring 1c. Send for price list.

C. A. WILLARD COMPANY, 177 Monroe St., Chicago, Ill.

THE ELECTRICITY from the batteries will turn a needle through your table or hand. Cures Rheumatism, Liver and Kidney Disease, Weak and Lame Back, etc. For advertising purposes we will give One Best Free to one person in each locality. Address E. J. SNEAD & CO., Dept. No. 266. VINELAND, NEW JERSEY.

AGENTS make \$15 to \$50 weekly selling our celebrated rubber stamps. Exclusive territory given. Samples furnished. **J. S. BERRY MFG. CO., A 26, Cincinnati, Ohio.**

STOP THAT PAIN Inclose one dime and self-addressed stamped envelope to Vici, Lock Box 166, Mt. Airy, Md., and receive recipe for **RHEUMATISM and GOUT**

Models for Patents We aid inventors. Write for catalogue. Established 1867. **CHICAGO MODEL WORKS, 181 Madison St., Chicago.**

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BED-WETTING CURED. Sample FREE. Dr. F. E. May, Bloomington, Ill.

ALL KINDS OF WATCHES from 98c. upward. Catalogue sent free. Safe Watch Co., P. O. Box 180, N. Y.

SMILES

[CONTINUED]

KISSES

The kiss that's stolen, now, is kissed
And gone for good; however,
The kiss that's kissed is seldom missed
So much as the kiss that's never.

WHEN PA SHAVES

When Sunday mornin' comes around
My pa haugs up his strop,
An' takes his razor out an' makes
It go c'flop! c'flop!
An' then he gits his mug an' hrush
An' yells t' me, "Behave!"
I tell y'u, things is mighty still—
Wheu pa begins to shave.

Then pa he stirs his hrush around
An' makes the soap-suds fly;
An' sometimes wheu he stirs too hard
He gits some in his eye.
I tell y'u, but it's funny then
To see pa stamp and rave;
But y'u mus'n't git ketched laffin'—
Wheu pa begins t' shave!

Th' hired hand he dassent talk,
An' even ma's afeard,
An' y'u can hear the razor click
A-cuttin' through pa's beard!
An' then my Uncle Bill he laffs,
An' says, "Gosh! John, you're brave,"
An' pa he swears, an' ma jest smiles—
When pa begins t' shave.

When pa gits done a-shavin' of
His face, he turns around
And Uncle Bill says, "Why, John,
Y'ur chin looks like plowed ground!"
An' then he laffs—jest laffs an' laffs,
But I got t' behave,
Cos things 's apt t' happen quick—
When pa begins t' shave!

—Harry Douglas Rohins, in Puck.

"CALL ME NELSE"

"I heard a story on General Miles the other day," said Mr. Samuel Q. Morgan, of New York. "I think that it comes straight, and will give it as it was told me by an officer on the general's staff who accompanied him on the Puerto Rico expedition.

General Miles is, I understand, a hard man to approach, and his official position as the head of the United States army naturally commands respect from those who come in contact with him.

"A day after the general landed in Puerto Rico one of his orderlies was taken sick with fever, and had to go to the hospital. A new man was called for, and a private from a western regiment was detailed to take the place. The recruit who showed up at headquarters came from somewhere up on the great lakes, and, I think, belonged to a Wisconsin volunteer regiment. Anyhow, to state it mildly, he was the greenest and most self-important recruit I ever saw. Along with his early schooling he must have read the clause in the declaration of independence that runs to the effect that all men are free and equal, and he bore himself accordingly.

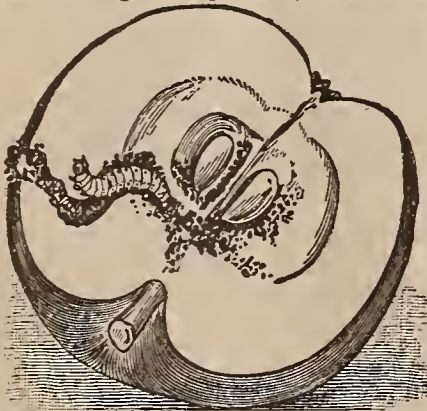
"The morning after he was detailed the general was holding a consultation at headquarters with some of the big officers of his command. The general called for an orderly to run an important errand, and the gentleman from Wisconsin sauntered in, made a pass at his hat with his left hand for a salute, and ejaculated:

"Well, Miles, what is it?"
"If the Spaniards had dropped a shell in our midst it would have hardly surprised us more. At first General Miles' face grew black as thunder, and then his scowl changed into a quizzical smile.
"Don't call me Miles; call me Nelse. Miles is so formal, you know."

"The gentleman from Wisconsin had meanwhile realized from the expressions on our faces what he had done, and with General Miles' remarks became the most confused man I ever saw. Some one else ran the errand—a regular, I think—and the hero of my story was never seen at headquarters again."—Washington Star.

SPRAYING FRUIT-TREES

The question of spraying fruit-trees to prevent the depredations of insect pests and fungous diseases is no longer an experiment, but a necessity.



Our readers will do well to write Wm. Stahl, Quincy, Illinois, and get his catalogue describing twenty-one styles of Spraying Outfits and full treatise on spraying the different fruit and vegetable crops, which contains much valuable information, and may be had for the asking.

We supplied the U. S. Government with all the low wheeled, broad tire, short turning trucks they used in the Cuban war.

WE MAKE TEN STYLES OF FARM TRUCKS.



We can give you wood or metal wheel wagons, or METAL WHEELS FOR YOUR OLD FARM WAGONS.

We sell direct to farmers. A postal card brings our catalogue telling you all about it.

FARMER'S HANDY WAGON CO.,
Saginaw, Mich.

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Guaranteed an unexampled bargain and the very finest seller of the year. Large Colored Maps and Plates. Hundreds of half-tones and other engravings. Beautifully illustrated chapters for all the States in the Union and all countries on the globe, and every department brought down to date. Shows with Spain, with p.otos of scenes in Porto Rico, Cuba, Philippines, Hawaii, etc. Portraits and biographies of Dewey, Sampson, Schley, Miles, Fitzhugh Lee, and others. Profusely illustrated Biographical Department of American Celebrities. Chronological Department gives all History by dates down to the peace with Spain.

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SILK REMNANTS FOR CRAZY WORK.

A big package of beautiful Silk Remnants, from 120 to 150 pieces, all carefully trimmed, prepared from a large accumulation of silks especially adapted for all kinds of fancy work. We give more than double any other offer, and the remnants are all large sizes, in most beautiful colors and designs. With each assortment is four skeins of the very best embroidery silk, assorted colors. Send 25 cents in silver or stamps to Paris Silk Agency, Box 3045, N. Y. City, N. Y.

Don't Break Your Back

with common hoes when you can buy this

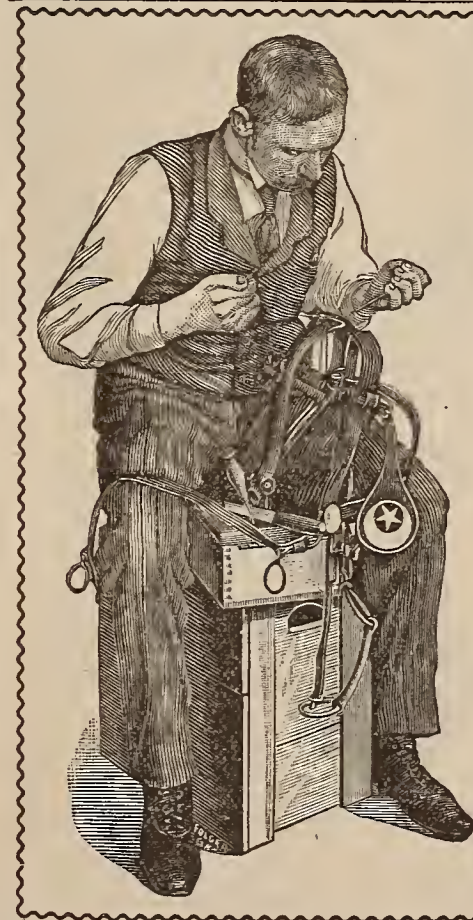
Hand Cultivator
and weeder and make gardening delightful. If you can't buy it of your dealer send \$1.25 for sample delivered. Agents wanted. The Ulrich Mfg. Co., 43 River St., Rock Falls, Ill.

A CORD AN HOUR NO WET KNEES. NO BACK ACHE.

Sawyer's weight does half the work. Fastest, easiest, cheapest and best one-man saw in the world. Cuts both ways.

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FAMOUS MFG. CO., CHICAGO, ILL

BED WETTING CURED. Box FREE.
Mo. REMEDY CO., St. Louis, Mo.



A Harness Shop Free

We will send the Harness Shop free for a club of 15 yearly subscribers to Farm and Fireside; or for a club of 9 subscribers and \$1 cash.

SATISFACTION GUARANTEED OR YOUR MONEY REFUNDED

Johnson's Portable Harness Shop consists of 1 Saddlers' Stitching-horse, the seat of which is a Varnished Hard-wood Chest 18 by 8 by 5 inches, with solid oak lid; 1 Strong, Heavy Clamp, neatly japanned, with polished jaws; 1 Steel Harness-knife; 1 Adjustable Sewing-awl Handle, with wrench; 1 Bent Sewing-awl; 1 Straight Sewing-awl; 1 Three-cornered Saw-file; 6 Imported Harness-needles; 1 Ball of Harness-thread; 1 Ball of Wax; 100 Bifurcated Rivets, with set. When not in use the clamp can be removed from the socket and the entire Harness Shop closed up in the box. Weight 12 pounds.

We send this Harness Shop, express prepaid, as specified in the shipping directions below.

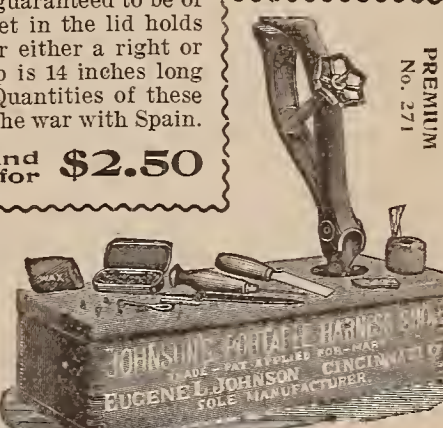
They Are Used by the U. S. Cavalry and Artillery

Everything about this Harness Shop is guaranteed to be of first-class material. The deep iron socket in the lid holds the clamp solid and in correct position for either a right or left handed man as desired. The clamp is 14 inches long and the polished jaws 3 1/2 inches wide. Quantities of these shops were sold to the U. S. army during the war with Spain.

We send the Shop complete, and Farm and Fireside one year, for **\$2.50**

SHIPPING DIRECTIONS The Harness Shop will be sent charges PAID to any express office in Minnesota, Iowa, Missouri, Tennessee and Mississippi, and to all states EAST of these, except Florida. For 50 cents extra the shop will be sent by prepaid express to Florida, Louisiana, Texas, Arkansas, Indian Territory, Kansas, Nebraska and the Dakotas. To other Western states the charges must be paid by the receiver.

FARM AND FIRESIDE
Springfield, Ohio





GLEANINGS

ROYAL SECRET SUBWAYS

BUT two sovereigns in the present century have displayed any taste for subterranean passages; namely, Napoleon III. and the present Kaiser of Germany. Napoleon III. had a secret underground passage constructed at Paris, leading from the Elysee Palace, beneath the Rue d'Elysee, to a private house on the other side of the street. This house belonged to his chamberlain, Count Bacchiocchi, and whenever the emperor wished to undertake some secret excursion without the knowledge of his jealous consort, he would proceed from the Tuileries to his former residence at the Elysee for the alleged purpose of working quietly there with his ministers, and then while his wife's spies remained watching at the gates of the palace he would quickly pass from his private room, through the subterranean passage to Count Bacchiocchi's house, enter the latter's carriage, and drive off. Eventually Italian conspirators found out the existence of this underground passage, and on one occasion toward the close of his reign an attempt was there made to stab the emperor, by an Italian carbonari, who was himself immediately killed by the emperor's Corsican body-guard, Baron Griscelli.

Emperor William has in the same way spent a considerable sum of money recently in the construction of his subterranean passage extending from the opera to the "Zeughaus," where a strong military detachment is always on duty. Thanks to this, the kaiser is able to reach his box in the opera and to leave it without being observed. The subway in question affords a significant demonstration of the little confidence which the emperor reposes in the loyalty of his Berliners. Possibly he recalls the fact that his granduncle, King Frederick William IV., was forced by the people of Berlin to stand bareheaded on the balcony of his palace while the corpses of all those who had been shot down by his soldiers, in 1848, were carried past him to the cemetery; while his grand father, old Emperor William, then Prince of Prussia, was compelled by these same Berliners to flee for his life to England.—New York Tribune.

OF SIGNIFICANCE TO WOMEN

Two bills just passed in the Arkansas legislature are of interest to women; one of them excuses husbands from liquidating the debts their wives contracted before marriage, unless a contract has been made stipulating for the payment of such debts.

The other bill was one passed by the house, but rejected by the senate, forbidding the employment of women as legislative clerks.

From Denver, Colorado, comes the news that both houses of the legislature have adopted a joint resolution recommending other states to give a trial to the woman suffrage system of Colorado.

OUR BODIES

The muscles of the human body exert a force of 534 pounds. The quantity of pure water which blood contains in its natural state is very great; it amounts to almost seven eighths. The blood is a fifth the weight of the body. A man is taller in the morning than at night to the extent of half an inch or more, owing to the relaxation of the cartilages. The human brain is the twenty-eighth part of the body, but in the horse the brain is not more than the four hundredth.—New York Ledger.

READ THIS BEFORE YOU COMPLAIN

If you receive a paper marked "Your time is out" after you have sent in your subscription, do not write a complaint to us about it; and if you receive a letter asking you to renew your subscription, do not write a complaint. Please remember that we are dealing with hundreds of thousands of subscribers, and it often happens that one set of clerks is marking papers "Your time is out," while another set of clerks is writing asking you to renew your subscription, and a third set of clerks is receiving letters containing subscriptions, and in our vast correspondence and business it requires one month after your subscription is received to have the printed label on your paper changed. Therefore, wait one month and watch the little yellow label on your paper and see if the date is not advanced one year. It will be time to write if the date on the label is not changed in one month.

Six Tools in One.

Remove one bolt from the "PLANET JR." No. 4 Combined Drill, and in a minute you can have a perfect Wheel-hoe, a Cultivator, a Rake, or a Plow, as you please. The drill drops in hills at any distance apart, or sows perfectly in drills, as desired. SIX TOOLS IN ONE—and each the best tool of its kind made.

This quick adaptation to the work is the great feature of all the "PLANET JR." tools—hand-drills, wheel-hoes, horse-hoes, and two-horse tools. The swiftness and cheapness of their work are the secret of farming success.

The new "PLANET JR." Catalogue for 1899 not only describes all these wonderful tools, but includes also SIXTEEN FULL PAGES of fine photographic views—interesting field scenes in France, New Zealand, etc., showing the different crops and methods of cultivation with the "PLANET JR." tools at work. Write us for a copy; it's sent free.

\$500 in Gold for the best gardens in 1899. Write for particulars.

S. L. ALLEN & CO., Box 1107 F, Philadelphia.

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OLIVER CHILLED PLOWS

There is no plow on earth to-day that has done so much for the agriculture of the world as the

Oliver Chilled Plow.

Our object has ever been to supply the farmer with the best plow that could be produced in the largest and most complete plow works in the world at a reasonable price. The hundreds of thousands of Olivers now in use bear testimony to the success of our plan. See the things that are new in the Oliver line in our printed matter.

From the nearest "Oliver Agent."

The Oliver Chilled Plow Works,
South Bend, Indiana,
U. S. A.



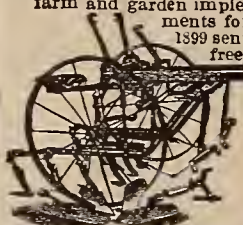
"OLIVER." "40."

To make money at farming it is necessary to use the best labor-saving and time-saving implements. The cost of cultivation is brought down to the lowest notch with the Iron Age Pivot Wheel Cultivator. The work of cultivation is done quickest and easiest. The wheels, guided by the feet, carry the gangs of teeth to right or left, as desired. Pivots have hardened steel ball-bearings. Gangs can be reduced to three or even two teeth. Equipped with one pair plows, shields and fallow tooth attachment. Does excellent work, even on hillsides or among very crooked or irregular rows.

BATEMAN MFG. CO. Box 187, Greencloch, N. J.

Iron
Age
Farms

The Iron Age Book of farm and garden implements for 1899 sent free.



SAVE MONEY! BUY YOUR FERTILIZERS DIRECT

You get the benefit of salesman's expenses and agent's profit. Our entire production goes from factory to farm. Write for free samples and book.

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WALL PAPER
For any room or every room can be selected from our sample book of beautiful new designs. Manufacturer's stock of 3,500,000 rolls to select from. All prices, from 5 cts. to \$3.00 a roll. 25 per cent. less than ordinary dealers prices. The sample book is free to any address. Agents wanted in every part of the country.
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\$60 Sewing Machines for \$18.
We sell every reliable Sewing Machine made. We employ no agents, pay no commissions, which enables us to save you from \$25 to \$40 on any Sewing Machine you may select. All machines brand new, guaranteed latest improved, with all attachments, and warranted for 10 years. (Satisfaction guaranteed or money refunded.) Our illustrated catalogue gives full particulars, and will be mailed free.
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For Your Library Books, Envelopes, Mail Packages, Etc.
Cheap, Useful, Attractive. Nicely engraved and printed with your name and town or equivalent. 30 letters in all. 100 for 10c; 500 Alike, 30c.
Agents make big money. These stickers sell at sight. Write copy very plainly.
Pasco & Candee, Berea, Kentucky.

Do You Own Sheep?
Let us send you a little book FREE showing how to protect your Sheep from Dogs by using our **HERO SHEEP COLLAR**. The cost is trifling, and it always does the work. Your name on a postal card will get the book.
WELLINGTON MFG. CO., Indianapolis, Ind.

A MACHINE
to weave your own fence of Colled Hard Steel Spring Wire.
52 inches high, at 25 Cts. per Rod.
\$20 buys wire for 100 rod fence. Agents Wanted. Catalogue Free.
OARTEK Wire Fence Mach. Co.
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FENCING
K. L. SHELLABARGER
For Poultry, half cost of Netting. Also farm, yard, cemetery fences, Freight paid. Catalogue free.
82 F. St. Atlanta, Ga.

Turkish Cleanser
Removes paint, grease or tar from most delicate goods without injury to fabric. Sample 10c., or this valuable receipt mailed for 30c.
B. A. Waterman, Salem, Mich.

ALL STEEL DISC HARROW

\$17.25 Buys this Steel 12-16 in. 2 lever harrow, 3-horse equalizer, with all modern improvements. Is made strong and durable. Sent C.O.D. subject to "Approval" on receipt of \$2.00, to be returned at our expense if not positively the best harrow ever sold at this price.

No. 50 TOP BUGGY

\$36.50 buys this handsome leather quarter top buggy, made of very best material and workmanship. Sent C. O. D. subject to "Approval" on receipt of \$2.00, to be returned at our expense if not positively the best buggy ever sold at the price.

We manufacture and handle full and complete lines of Carriages, Buggies, Wagons, Farm Implements, Pianos, Organs, Twine, Bone Cutters, Incubators, and many other things at manufacturers' prices. Ask for Catalogue
JOHN DORSCH & SONS,
205 Wells St., Milwaukee, Wis.

Ease the Horses

There's a wonderful saving of draft in a Hench & Dromgold riding or walking

SPRING TOOTH WHEEL HARROW

Write for our new illustrated catalog and find out all about the best harrows, cultivators, corn planters, grain drills, etc. Mailed free.
HENCH & DROMGOLD, York, Pa.

LEARN TELEGRAPHY

Young men and women wanted for good positions. Address **FISK TELEGRAPH SCHOOL, Lebanon, Pa.**

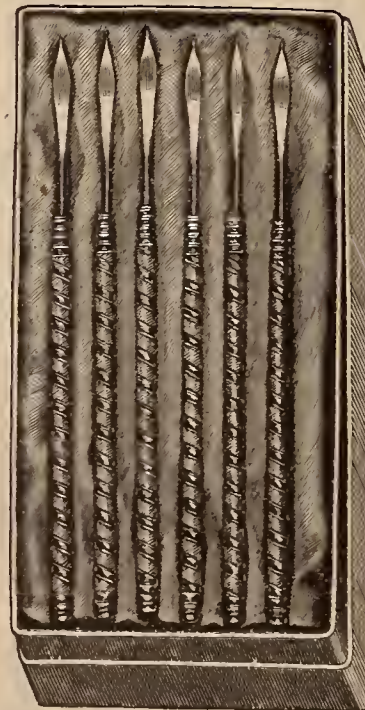
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SECOND CROP SEED POTATOES. Superior to any grown. BEST BERRY PLANTS, all choice varieties, by the dozen or 100,000. Catalogue free. J. W. HALL, Marion Station, Md.

SIX SILVER-PLATED NUT-PICKS

These silver-plated nut-picks sell in jewelry-stores for 50 cents a set and upward, but by contracting with the manufacturers for an enormous number of sets we bought them at a price which enables us to make the very liberal offer below. The reduced illustration shows the set in box.



Premium No. 125

These silver-plated nut-picks are five inches long, made of fine steel, and silver-plated. They have handsomely turned handles, and are one of the most popular styles. Every family needs a set of nut-picks.

Each set of these silver-plated nut-picks comes in a cloth-lined box which measures 5 1/2 inches long, 3 inches wide and 5/8 of an inch thick. They make a handsome as well as a useful present.

FREE This Set of Six Silver-plated Nut-picks Given FREE for a club of TWO yearly subscribers to the Farm and Fireside.

We will send the Farm and Fireside one year and this Set of Six Silver-plated Nut-picks for 50 cents. . . .

50 Cents

Exact Size.

(When this offer is accepted the name may be counted in a club.)

Postage paid by us. Address **FARM AND FIRESIDE, Springfield, Ohio.**

you to investigate. No Outfits to sell you. Equitable Reporting Co., Dept. Z. D., 247 W. 125th St., N. Y.

A GOOD COMPLEXION

Depends on Good Digestion

This is almost an axiom, although usually we are apt to think that cosmetics, face powders, lotions, fancy soaps, etc., are the secret for securing a clear complexion.

But all these are simply superficial assistants. It is impossible to have a good complexion unless the digestive organs perform their work properly; unless the stomach by properly digesting the food taken into it furnishes an abundance of pure blood a good complexion is impossible.

This is the reason so many ladies are using Stuart's Dyspepsia Tablets, because they promptly cure any stomach trouble, and they have found out that perfect digestion means a perfect complexion and one that does not require cosmetics and powders to enhance its beauty.

Many ladies diet themselves or deny themselves many articles of food solely in order to keep their complexion clear.

When Stuart's Dyspepsia Tablets are used no such dieting is necessary. Take these tablets and eat all the good, wholesome food you want and you need have no fear of indigestion nor the sallow, dull complexion which nine women out of ten have, solely because they are suffering from some form of indigestion.

Bear in mind that beauty proceeds from good health, good health results from perfect digestion, and we have advanced the best argument to induce every man or woman to give this splendid remedy a trial.

Stuart's Dyspepsia Tablets can be found in drug stores, and cost but 50 cents per package. They are prepared by the F. A. Stuart Co., Marshall, Mich.

If there is any derangement of the stomach or bowels they will remove it and the resultant effects are good digestion, good health and a clear, bright complexion. Ask your druggist for the tablets and a free book on stomach diseases.

REMEDIES FOR CORNS

To cure an ordinary case of chilblain, take a piece of lemon, sprinkle fine salt over it, and rub the feet well. A sure cure for broken chilblains is the following: Take one quarter of a pint of oil of sweet almonds, one ounce of Venice turpentine, three ounces of lanolin and one ounce of beeswax cut into shreds; melt all together in a white-ware pot, and then put aside to cool, stirring occasionally to prevent the preparation from becoming too hard. Spread this ointment on lint, and keep the chilblains covered with it at night and as much of the day as is practicable.

If you are troubled with soft corns, do not fail to try the following treatment: Soak the feet well at night in hot water in which has been dissolved a few crystals of permanganate of potash. Then dry carefully, especially between the toes, and dust the skin in these parts freely with a mixture of tannic acid and boracic acid. Next morning wash carefully with pure soft soap and cold water, thoroughly dry, and powder with boracic acid.

A piece of lemon or a split raisin bound on a hard corn will very often cure it. The first application may produce soreness, but if treatment is persisted in a reasonable length of time a cure will likely be effected. If not, try the following preparation: Thirty grains of salicylic acid and five grains of Indian hemp, to be dissolved in half an ounce of collodion.—Boston Herald.

ARE WIVES A BLESSING?

THE MASCULINE POINT OF VIEW

"God bless our wives. They fill our lives with little bees and honey. They soothe life's shocks, they mend our socks, But don't they spend the money?"

That's an Old Country jingle. But it represents the masculine sentiment of all countries. The wife is a great blessing—but she's expensive. However helpful she is there's always that qualifying "but" when the masculine mind dwells on money—and when doesn't it?



There's no satisfying some people, especially when the pocketbook is touched. That is what makes the main happiness of many a good wife. She works hard, she devotes herself to husband and family. But when she wants a dollar she has to beg for it, and probably he asked: "Why, where's that dollar I gave you the other day?" The "other day" is weeks ago. It would serve the man right to let him find an empty table at dinner-time, and when he asked for dinner ask him: "Where's that dinner you had yesterday?" But the wife doesn't do that. She tries to "manage along." And this is not so bad when it's only a question of a new gown or hat. But when it's a question of health it is very different.

It is undoubtedly the case that many a woman lets little ailments grow to great diseases sooner than ask her husband to pay a doctor's fee. The husband is not unkind at heart. If he knew there was anything wrong he'd be the first to propose a doctor. But he doesn't note the slow change in his wife's appearance and he doesn't feel the aches and pains which make the day's work drudgery.

It is under circumstances such as these that women appreciate the offer of Dr. R. V. Pierce, of a consultation by letter, free. Dr. Pierce is not only a physician. He is a specialist in woman's diseases. For more than thirty years as chief consulting physician to the Invalid's Hotel and Surgical Institute, at Buffalo, N. Y., he has made diseases peculiar to women an especial study. He has treated more than half a million of cases, and ninety-eight out of every hundred treated have been positively cured. Thousands of cases have been reached by what so many have called "that God-send to women," Dr. Pierce's Favorite Prescription. Its efficacy in stopping debilitating and offensive drains, curing ulceration, inflammation and bearing-down pains is testified to by thousands of grateful women who have consulted Dr. Pierce as to their health and ailments.

"It is with heart-felt gratitude to you for your kind advice that I must tell you what your medicine has done for me," writes Mrs. A. F. Crenshaw, of Panasoffkee, Sumter Co., Fla. "After consulting you about my case I took your medicine and can say it cured me of female weakness. I was all run down; suffered with sick headache, pains in the back and bearing-down pains. I took two bottles of Dr. Pierce's Favorite Prescription, and was then able to take care of my house. My health is better than it has been for three years. I do not know how to thank you for the kind advice you gave so cheerfully."

There's an advantage in this consultation by letter which the modesty of women is quick to see and take advantage of. It does away with the indelicate questionings, the offensive examinations and local treatments, of the average physician. It's an entirely private consultation. The letter is read as privately as it is written. Its contents are held as absolutely sacred. The answer is sent in a perfectly plain envelope bearing upon it no printing or advertising to show where it comes from. Every woman can write freely, frankly and fearlessly, know-

ing that she will receive friendly as well as medical advice from the most competent authority.

Sometimes a natural doubt arises as to how Dr. R. V. Pierce can be so sure of succeeding where others fail. But the fact is easy to explain. There was a woman once celebrated for her "angel-food." A friend went to her and begged the recipe. It was given her with the most careful cautions as to making and baking. The friend went home delighted. She started right off to make a cake. She measured, she weighed, she mixed, she tasted. But the cake came out of the oven a flat failure. She tried again. No better results. Then she said the woman had deceived her in the recipe. But the woman took the same recipe and made a cake that melted in the mouth. Now, why couldn't the friend make that cake just as well as the woman that gave the recipe? Because the woman couldn't give the friend with the recipe the skill and experience that went into her success.

That explains Dr. Pierce's success. The same sources of knowledge are open to any physician. But with the same facilities that Dr. Pierce has they fail, because they lack the experience and skill which counts for so much in Doctor Pierce's cures.

There is no medicine to compare with "Favorite Prescription" in its wonderful work for women. In young women it corrects the irregularities which are so fruitful of latter evils. It dries up the unhealthy and unpleasant drains to which so many women owe a life of misery. It heals inflammation and ulceration and cures female troubles. It gives vigor and elasticity to the organs peculiarly feminine. It makes motherhood a joy by robbing its preceding days of all anxiety, forboding and discomfort; by making the baby's advent natural and therefore easy and almost painless, and by an ample lactea-provision by which the nursing mother has constant joy.

Advertisements are sometimes designedly worded to induce women to enter into correspondence supposedly with a woman physician. Women are urged to write to a woman on the plea of receiving a "woman's sympathy," and because "a woman best understands women." There is no special feminine road to medical knowledge. If a woman understands disease, she understands it not as a woman but as a physician. Mere sympathy won't relieve pain or cure



disease. The need is of competent medical advice. As far as known there is no qualified woman physician connected with any proprietary medicine, and therefore no woman competent to give medical advice. It is certain that no one else can offer as does Dr. R. V. Pierce the free benefit of thirty years of special study of woman's diseases, supported by a record of more than half a million cases treated with ninety-eight per cent of cures.

Dr. Pierce's Common Sense Medical Adviser is sent absolutely free on receipt of stamps to pay cost of mailing only. Send 21 one-cent stamps for the paper-bound edition, or 31 stamps for the handsome and durable cloth-bound work. Address Dr. R. V. Pierce, Buffalo, N. Y.

HATCHING MADE EASY

For pleasure or profit, the Ertel Victor Incubator brings success. Chicken raising by incubator and brooder is still a fascinating pursuit, either when carried on for amusement or profit, and the fascination is not at all decreased by the fact that incubators have been so much improved that there is no longer any uncertainty about hatching out a profitable proportion of eggs. The home market for poultry is still crying for more and better supplies.

For the poultryman who works for pleasure or for profit there are many entertaining and suggestive facts contained in the annual catalogue of the George Ertel Company, of Quincy, Ill. They will send their illustrated catalogue to any one who is interested.

Bad colds are often mistaken for Consumption, when they are in reality caused by Bronchitis. This disease, in its early stages, can always be cured with Jayne's Expectorant.

QUEER ADVERTISEMENTS

"No person," wrote an imaginative undertaker, "ever having tried one of these airtight coffins of ours will ever use any other."

This is supplemented by the truthful but discouraging advertisement of a dentist: "Teeth extracted with great pains."

An advertisement once appeared in a Washington paper for "a room for a young man ten by twelve."

This is an advertisement from the columns of an English court journal: "Blankets! Blankets! Blankets! For domestic and charitable purposes of every description, quality, size and weight."

The following advertisement is from an Australian paper: "Wanted a young woman (the plainer the better) to help a small, genteel family in their domestic matters; one without ringlets preferred."

An American paper published in Paris recently contained the following unique advertisement: "A young man of agreeable presence, and desirous of getting married, would like to make the acquaintance of an aged and experienced gentleman who could dissuade him from taking the fatal step."

READ THIS BEFORE YOU MAKE COMPLAINT

If you have at any time during the past month mailed your subscription to us, or given it to a club-raiser, or sent it to some paper that is clubbing with ours, or renewed your subscription through any source, please do not write a complaint to us about it because you receive a letter from us requesting you to renew your subscription, or because you receive a paper marked "Your time is out."

After a subscription is received in our office it takes about a month for the change to be made in the printed mail list; this is the reason you may receive papers marked "Your time is out" after you have sent your renewal. But do not write for at least one month after receipt of our letters and circulars, or papers marked "Your time is out," and do not write at the end of one month unless your subscription is not extended on the yellow label.

If our friends will bear in mind the above facts, and be a little patient, it will save them unnecessary worry and trouble, and save us much time and work.

THEIR MAIDEN NAMES

The following is a complete list of the maiden names of the mothers of the presidents of the United States: Washington, Mary Ball; John Adams, Susanna Boylston; Jefferson, Jane Randolph; Madison, Nellie Conway; Monroe, Eliza Jones; J. Q. Adams, Abigail Smith; Andrew Jackson, Elizabeth Hutchinson; Van Buren, Maria Hoos; Harrison, Elizabeth Bassett; Tyler, Mary Armistead; Polk, Jane Knox; Taylor, Sarah Strother; Fillmore, Phoebe Millard; Pierce, Anna Kendrick; Buchanan, Elizabeth Spear; Lincoln, Nancy Hanks; Johnson, Mary McDonough; Grant, Hannah Simpson; Hayes, Sophia Birchard; Garfield, Eliza Ballou; Arthur, Malvina Stone; Cleveland, Annie Neal; Harrison, Elizabeth Irwin; McKinley, Nancy Campbell Allison.

Costs Nothing To Prove It.

We guarantee to cure **Rheumatism** or to promptly return money paid for it, without "ifs" or "ands." A single bottle will cure many cases, and, two to four bottles, will cure the most obstinate cases.

BRADLARA

(TRADE MARK)

Rico Rheumatism Cure

Contains no Salicylic Acid, nor minerals of any kind whatever, therefore, does not corrode the Stomach, but cures radically by **Removing the Cause**, and eliminating the disease from the system. A single bottle has, again and again, cured obstinate cases, which refused to yield to other so-called remedies.

We have such complete faith in "**BRADLARA**," that we guarantee it to cure, and you will have little trouble to ascertain that our guarantee is as good as a U. S. gold bond; it means just what it says. If it fails to cure, it costs you not a penny. Price is only **\$1.00**. A-11 Rico Rheumatism Cure, 11 E. 5th St., Cincinnati, O.

FAT

How to Reduce It
Mrs. L. Lanier, Mar-
tin, Tenn., writes:
"I reduced my weight 24 lbs. in 15 days,
without any unpleasant effects whatever." Purely
vegetable, and harmless as water. Any
one can make it at home at little expense.
No starving. No sickness. We will mail
a box of it and full particulars in a plain
sealed package for 4 cents for postage, etc.
HALL CHEMICAL CO. B Box St. Louis, Mo.

Boys & Girls

We are giving away watches, cameras, solid gold rings, sporting goods, musical instruments & many other valuable premiums to boys and girls for selling 13 packages of **Royal English Ink Powder** at 10c each. Every package makes 50c worth of fine ink. We ask no money—send your name and address, and we will forward you 13 packages with premium list and full instructions. When you sell the **Ink Powder** send the money to us and select your premium. This is an honest offer. We trust you. Don't lose this grand opportunity. Write for the outfit today. Address all orders to **Imperial Ink Concern, 62 Adams St. Oak Park, Ill.**

USE IT FREE

30 days in your own home before paying one cent in advance; shipped anywhere, to anyone, for 30 days' test trial. We risk you. \$60 White Star Machine, - - \$225.00
\$30 Pearl Machine, - - - 15.00
Standard Machine, \$9, \$12.50, 16.00
Full set of attachments free; by from factory and save \$10 to \$40; WE PAY FREIGHT, thousands in use; catalog, showing 20 other styles, free. Each machine guaranteed 10 years.
CONSOLIDATED WHOLESALE SUPPLY CO.
Dept. 91, 215 S. Clinton St., Chicago, Ill.

BROWN'S BRONCHIAL TROCHES

Clear the voice, Relieve the throat, Cure coughs and colds.

1850—In boxes only—1898

WANTED

RELIABLE MEN in every locality, local or traveling, to introduce a new discovery and keep our show cards tacked up on trees, fences and bridges throughout town and country; steady employment; commission or salary; \$65.00 PER MONTH AND EXPENSES not to exceed \$2.50 per day; money deposited in any bank at start if desired. Write for particulars.
THE GLOBE MEDICAL ELECTRIC CO., Buffalo, New York.

PARKER'S HAIR BALSAM

Cleanses and beautifies the hair. Promotes a luxuriant growth. Never Fails to Restore Gray Hair to its Youthful Color. Cures scalp diseases & hair falling. 50c, and \$1.00 at Druggists.

740

50c Prize Cards, Love, Transparencies, Etc., and Acquaintance Cards. LAUGHING CAMEO. Prize Puzzles, New Games, Magical Illusions, Etc. Finest Sample Book of CARDS. Biggest List of Visiting and Hidden Names. Premiums in All for 1c stamp. **OHIO CARD CO., Cadiz, Ohio.**

PILES

Instant relief; final cure in a few days. Never returns; no purge; no salve; no suppository. **Remedy mailed free.** Address C. J. MASON, Box 519, NEW YORK, N. Y.

DR. ISAAC THOMPSON'S EYE WATER

If afflicted with SORE EYES.

FITS

A Great Remedy Discovered. Send for a FREE package & let it speak for itself. Postage 6c. **DR. S. PERKEY, Chicago, Ills.**

MAMMOTH BARGAIN IN BOOKS

This is the most stupendous bargain in books ever offered Farm and Fireside readers. Just think of it! 10 COMPLETE AND SEPARATE BOOKS, WITH FARM AND FIRESIDE ONE YEAR, FOR ONLY 40 CENTS. It is a chance of a lifetime to get books for almost nothing. The reason why we can do it is too long to print here. We guarantee the books to be as described and give entire satisfaction or money refunded. If upon receipt of the 10 books you are not fully satisfied, say so, and back will come your 40 cents immediately. Only a few thousand sets of the books are left, so BE QUICK IN SENDING YOUR ORDER. (Those who send too late will have their money returned.) See clubbing offer below.

Below we give a brief description of forty good and useful books, suited for every member of the family. Many are by famous authors, known wherever the English language is spoken. There are novels by such great authors as Bertha M. Clay, Miss M. E. Braddon, Charles Dickens, Nathaniel Hawthorne and others. There are sermons by the great Talmage, books by the inspired Spurgeon and Drummond, fables by Aesop, stories of adventure and travel for boys and girls, chimes and jingles for the children, books of choice fun and humor, and numerous other books on various subjects. Each book is 5½ inches wide by 7½ inches long.

One of the books offered below contains over 600 pages, another one contains over 400 pages, several contain nearly 300 pages, while quite a number contain over 200 pages, and the remainder contain from 64 to 178 pages. Each book is separate and complete. All of the books are bound in strong paper covers, with attractive designs. ANY TEN OF THE BOOKS COUNT AS ONE PREMIUM.

Any Ten of These Books Given Free for a Club of TWO Yearly Subscribers to Farm and Fireside

PLAIN TALKS BY REV. CHAS. H. SPURGEON

No. 971. **John Ploughmen's Pictures.** By the late Rev. Chas. H. Spurgeon, the great London preacher and evangelist. This is one of the most original and popular books of the age. The author states in the preface that its object is to smite evil, and especially the monster evil of drink, and it is safe to say that the plain talks of John Ploughman, couched in Spurgeon's quaint sayings, his wit, his logic, his power for good, have accomplished more than any similar publication. This book can be read by every member of the family over and over with increasing pleasure and profit, and every mother who has a son that must face the temptations of the terrible curse of drink will place a good weapon in his hands when she induces him to read this work. Illustrated.



No. 955. **The Scarlet Letter.** By Nathaniel Hawthorne, one of the greatest authors America has produced. It is a romance of intense interest, exhibiting Hawthorne's extraordinary power of mental analysis and graphic description. The entire book is of a high moral character, and can be read with profit by every member of every family.

No. 973. **Aesop's Fables.** These fables were written during the glory of the Greeks, and though old, they are even more popular to-day than ever before. Many of the wise sayings that are repeated on all occasions are from these fables, yet not one out of a thousand know who first wrote them, as "He killed the goose that laid the golden eggs." Aesop was a slave, but by his mother-wit gained fame that will endure as long as any of the "Seven Wise Men of Greece." But the great beauty of these fables lies in the fact that they are so very simple that all children will read them with delight, all the time unconsciously learning the greatest and best lessons of an upright, unselfish life. Every person should have a copy of "Aesop's Fables." There are about 200 of the best fables given in this book, with forty-nine illustrations and six pages devoted to the life and times of Aesop.

No. 965. **Thorne's Poultry Book.** A complete guide in every branch of poultry-raising, by a noted authority, giving the peculiarities of all known domestic fowls, with their diseases and the remedies, the best methods of housing, hatching, feeding, etc. 90 illustrations.

SERMONS BY T. DE WITT TALMAGE

No. 974. **Talmage on Palestine.** A book containing a series of sermons, by the Rev. T. De Witt Talmage, about his recent and noted travels through Palestine, telling what he saw and learned there. They make such delightful reading, and so instructive and entertaining, that the book is immensely popular. On the days he delivered these sermons in his church in Brooklyn, which seated 4,500 people, thousands were turned away from the doors for want of standing-room inside the church. Even to read the book makes one thrill through and through.



No. 977. **Robinson Crusoe.** By Daniel Defoe. The life of Crusoe and his man Friday, on a lonely island, has enlisted the sympathy of more boys than the heroes of any other story, and to-day it is even more popular than ever before. It satisfies their thirst for adventure without the demoralizing effects common to many boys' stories.

No. 952. **The Arts of Beauty.** By Shirley Dare, the most famous American writer on subjects pertaining to ladies' toilet. This is a splendid book for girls and women. Gives honest and valuable instructions about making the toilet, keeping healthy, young and beautiful, etc.

No. 950. **A History of the United States.** A very interesting and reliable work.

No. 991. **The Fatal Marriage.** By Miss M. E. Braddon. This is a thrilling story, in which a man marries a lovely girl for her wealth, and as it should always be, he came to grief as a reward for his deception.

No. 969. **Short Stories.** A book containing a number of short stories of adventures, which will be eagerly read by boys and girls.

Below we offer eight popular books by Charles Dickens, one of the greatest novelists who ever lived. These books abound in wit, humor, pathos, masterly delineation of character, vivid description of places and incidents. They are intensely interesting to children as well as grown persons.



No. 996. The Haunted Man.

By Dickens. An interesting love-story into which are gathered some of the truest and noblest of the bright thoughts of the wonderful author.

No. 953. **The Cricket on the Hearth.** By Charles Dickens. This is a simple tale of home life, and being a fairy tale, is sure to interest the children. The story opens about dusk, with Mrs. Perryngale putting on the tea-kettle, which soon begins to have gurgles in the throat, and indulge in vocal snorts.

No. 995. **The Battle of Life.** Dickens.

No. 997. **Two Ghost Stories.** Dickens.

No. 994. **A Christmas Carol.** Dickens.

No. 954. **A Goblin Story.** Dickens.

No. 981. **Great Expectations.** Dickens.

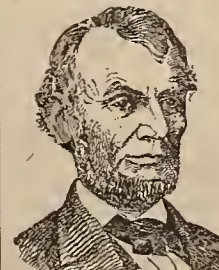
No. 998. **Four Christmas Stories.** By Charles Dickens. Oftentimes one wants to read something short, yet interesting and elevating. These short stories by Dickens are unexcelled.

No. 963. **Recipes for Making 200 Kinds of Soap.** The art of soap-making is very simple, and with these recipes any lady can make all the soap needed for her family.

No. 990. **On Her Wedding Morn.** By Bertha M. Clay. In the world of fiction there have been but few characters to whom the sympathies of the reader goes out with more tenderness than Hulda Vane, the heroine. This is the companion novel to "Her Only Sin," and will be read with the same intensity of feeling, with mingled joy and sadness as the characters in the book have cause for tears or laughter. It is a love-story that must appeal to every reader.

No. 957. **How the Widow Bedott Popped the Question to Elder Sniffles.** This book is funny—even funnier than the title implies. The Elder was an old-time Baptist preacher, and a widower. Now, the widow had often ridiculed the Baptists, but the way she changed her tune after she had "set" her heart on the Elder was a caution, as well as comical. The Elder thought the Widow was rich, and so accepted her proposal. The reader will have many a hearty laugh at their expense, and likely repeat, "Old fools are the biggest fools of all."

No. 985. **Anecdotes of the Rebellion** is a grand collection of war-stories and camp-fire yarns. Every anecdote is a true story of some incident connected with the late war. Everyone will be glad to own this book. By telling these stories, a speaker can keep an audience in laughter or tears at will. It gives anecdotes of Foragers, Raiders, Scouts, Stories of Prison Life, Union and Confederate Spies, of the Generals, Lincoln's jokes, etc., etc.



No. 989. **Her Only Sin.** By Bertha M. Clay, author of "The Shattered Idol," "On Her Wedding Morn," and other noted books. For stories of love, adventure and romance, delightfully told, replete with stirring incidents that will hold the reader from the beginning to the end, there are a few better than those of Bertha M. Clay. "Her Only Sin" is fine. It is just the novel to read in a single evening, for once you begin you can't lay it down till you know the end.

No. 960. **A Bird of Passage.** By Beatrice Harraden, author of "Ships that Pass in the Night," which had a wonderful sale through America and England. Few ladies have written more popular stories than Miss Harraden. "A Bird of Passage" is original and interesting.

LECTURES OF HENRY DRUMMOND

Prof. Henry Drummond is without doubt the most popular writer of the age. It is with much pride that we are enabled to offer three of his most popular works. If you read one, you will want all; and if you read them once, you are almost certain to read them over and over.

No. 964. **The Greatest Thing in the World.** By Henry Drummond. This book is on love as taught by Christ and the disciples; and if any one doubts that love is the greatest thing in the world, and if they want to be made stronger in their love for all things, they must get this book by all means.

No. 963. **Changed Life.** By Henry Drummond. If you want a practical solution of the cardinal problem of Christian experience, read this book on "Changed Life." You will be drinking at the fountain of eternal life.

No. 962. **Peace Be With You.** By Henry Drummond. This book might be called a short treatise on Rest, Joy, Peace, Faith and Light. It is so simple, yet so grand and so clear, that you lay the book down feeling that a new and brighter day had dawned in your life.

No. 992. **Old Mother Hubbard, and Other Nursery Rhymes and Jingles.** Illustrated. For generations these rhymes have delighted the children. The comical pictures, the fairy stories and short verses are a never-ending source of delight. This is the complete book, containing one hundred and thirty-nine stories and over seventy illustrations, including "Old Mother Hubbard," "This is the House that Jack Built," "Yankee Doodle Came to Town," "Tom, Tom, the Piper's Son," etc.



She went to the barber's,
To get him a wig,
And when she came back
He was dancing a jig.

There are seven more pictures and fourteen verses similar to the above to the story of Old Mother Hubbard. The book contains one hundred and thirty-nine stories and over seventy pictures and illustrations. This is one of the best books for children in the entire list.

No. 986. **A Bartered Birthright.** By Franklin Fitts. This story tells the struggle between justice and injustice, in the author's entertaining style. A man occupying a prominent position in a leading banking-house becomes addicted to the gambling habit and takes money from the bank. The blame is attached to a young man recently discharged by this man for paying attention to his daughter. The story ends with a victory for justice and the offender sighing in vain for squandered honor and a forfeited birthright.

No. 959. **The Courting of Dinah Shadd.** By Rudyard Kipling.

No. 999. **The Idle Thoughts of an Idle Fellow.** By Jerome K. Jerome. For that common but extremely unpleasant complaint, "the blues," this book is a pleasant and effective cure.



Mr. Jerome is sometimes called the "English Mark Twain," and is certainly one of the best living writers of pure, wholesome fun. There is not a dull line in the book. Every paragraph is scintillating with flashes of brilliant wit. Who has not, at some time or another, had "the blues," or been "hard up?"

Who has not been in "love?" For a royal treat, read the author's thoughts on these and numerous other subjects. The "thoughts" which fill a book may be "idle," as the author terms them, but they certainly emanate from a busy brain.

No. 958. **The Merry Men.** By R. L. Stevenson. When an author's works live after him, they are, as a rule, worth reading. The stories by Stevenson have stood this test, and are now widely read. "The Merry Men" is a story that you will not forget soon after reading it.

No. 961. **Dr. Jekyll and Mr. Hyde.** By R. L. Stevenson. One of the authors best.

No. 966. **Outdoor Sports.** A book of games and healthful recreation for outdoor sports of every description, with rules for playing and marking off the grounds, or making the bats, ropes, balls, etc. It contains forty-four illustrations, showing proper positions in swimming, boating, cricket, foot-ball, dumb-bells, Indian clubs, etc. Among the many games given in this book the following are a few: Foot-ball, Baseball, Marbles, Hopscotch, Prisoner's Base, Duck on the Rock, Tops, Flying and Making Kites, Cricket, Shinty, Croquet, Tennis, etc. Oftentimes boys are at a loss what to play, but with this book they will always have something new.

No. 975. **Bread and Kisses.** By B. L. Farjeon, author of "Grief," "Joshua Marvel," and other popular books. This might be called a book of sermons in a novel. It tells a story of two loving hearts, who begin their home in poverty, and then while the author is carrying them from their home up through the vicissitudes of life to greater places, he gives many arguments why people should be more generous and less selfish, why the rich should be more mindful of their responsibilities because of their wealth, and why honesty is the best policy. Illustrated.

No. 956. **The Courtship of Widow Bedott and Mr. Crane.** If there is any truth in the old saying, "Laugh and grow fat," then the Widow Bedott books will help to make lots of fat. Mr. Crane was a neighbor, and a widower. He frequently called at the Widow's house, and she naturally thought he was courting her, so she tried to encourage him and get his courage up to the point of proposing. She succeeded, but he asked the Widow for the hand of her daughter Malissy. Then the Widow saw her predicament, and how she did storm! If you want a hearty laugh, try the Widow Bedott books.

No. 970. **Good Manners.** Edited by Mrs. M. W. Baines. A manual of true politeness, containing chapters on good behavior, receptions, dinners, parties, balls, letter-writing, courtship and marriage, anniversaries, etiquette in public, customs regarding funerals and mournings, etc. The book contains twenty chapters.

No. 984. **Gulliver's Travels.** Tells the supposed travels and surprising adventures of Lemuel Gulliver into an unexplored part of the world, where he met with a race of people no larger than your hand. A great favorite with boys and girls, who like to read books of travel. Illustrated.

No. 976. **Noble and Heroic Deeds.** Compiled by A. D. Hosterman. This book consists of sketches from the lives of men and women who became famous for noble and heroic deeds, with incidents in their lives.

No. 951. **Herbert's History of the Civil War.** An authentic account of that great struggle between the North and South now so happily healed over in fraternal and patriotic friendship.

10 Books We Will Send Any TEN of the Above Books, and Farm and Fireside One Year, for only 40 Cents

The supply of the books is limited. Therefore, if a book is ordered the stock of which has become exhausted, we reserve the right to substitute for it a book equally as large or larger. Notice our offer at top of page to refund money if not satisfactory.

When the above offer is accepted the name may be counted in a club-raiser's club. Postage paid by us in each case

Address FARM AND FIRESIDE, Springfield, Ohio

40 Cent Patterns for 10 Cents

We will send any TWO PATTERNS, and this paper one year, for 40 CENTS

(When this offer is accepted the name may be counted in a club.)

These patterns retail in fashion bazaars and stores for twenty-five to forty cents each, but in order to increase the demand for our paper among strangers, and to make it more valuable than ever to our old friends, we offer them to the lady readers of our paper for the low price of only 10 Cents Each.

Full descriptions and directions—as the number of yards of material required, the number and names of the different pieces in the pattern, how to cut and fit and put the garment together—are sent with each pattern, with a picture of the garment to go by. These patterns are complete in every particular, there being a separate pattern

for every single piece of the dress. All orders filled promptly.

For ladies, give BUST measure in inches. For SKIRT pattern, give WAIST measure in inches. For misses, boys, girls or children, give both BREAST measure in inches and age in years. Order patterns by their numbers.

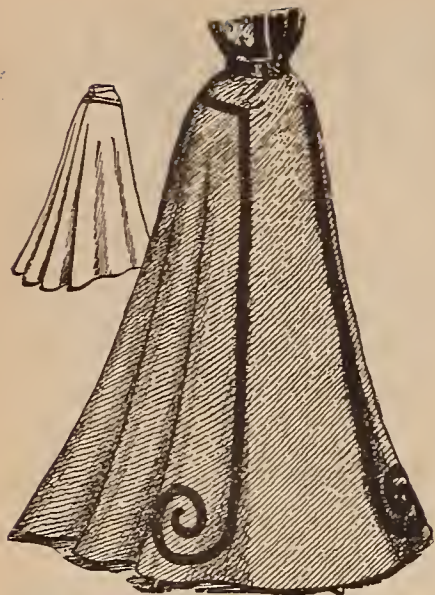
Satisfaction guaranteed or money refunded.

To get BUST and BREAST measure, put the tape-measure ALL of the way around the body, over the dress, close under the arms.

Special price of each pattern 10 cents.

Postage one cent EXTRA on skirt, tea-gown and other heavy patterns.

Address FARM AND FIRESIDE, Springfield, Ohio



No. 7541.—LADIES' SKIRT. 11 cents.
Sizes, 22, 24, 26, 28 and 30 inches waist.



No. 7584.—LADIES' SHIRT-WAIST. 10 cents.
Sizes, 32, 34, 36, 38 and 40 inches bust.



No. 7592.—CHILD'S FROCK. 10 cents.
Sizes, 1, 2 and 4 years.



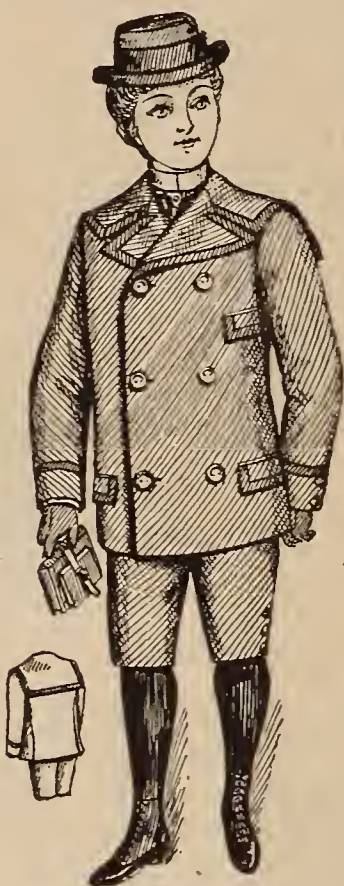
No. 7555.—LADIES' HOUSE JACKET. 10c.
Sizes, 32, 34, 36, 38, 40 and 42 inches bust.



No. 7593.—LADIES' FIVE-GORED FLARE SKIRT. 11 cents.
Sizes, 22, 24, 26, 28 and 30 inches waist.



No. 7553.—LADIES' FANCY WAIST. 10 cents.
Sizes, 32, 34, 36, 38 and 40 inches bust.



No. 7566.—BOYS' BOX REEFER SUIT. 10 cents.
Sizes, 4, 6, 8, 10 and 12 years.



No. 7571.—LADIES' WAIST. 10c.
Sizes, 32, 34, 36, 38 and 40 inches bust.
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